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SPACE, TIME, AND INDIVIDUALS *

IN this paper I shall be concerned with a problem having to do with the nature of individuals. I shall not say *what* problem, because any attempt to formulate it in detail at this point would convey nothing. It is worth mentioning, however, that we are *not* asking, "What is the meaning of the word, 'individual'?" We know that already: an individual is an entity of lowest type, or, to be an individual in the domain of a certain language is to be a value of the lowest type (i.e., individual) variables of that language. The question is rather, "What sort of entities are these entities of lowest type?" I shall suggest that this question can be answered only with reference to a specific language or language type. The *Principium Individuationis* is relative to language. The thesis is, of course, nothing new, but I propose to examine it in some detail and to contrast at least two types of language.

I

Let us begin by considering the case of a person who is well aware that the morning star is in some sense identical with the evening star, yet has an instinctive aversion to saying that the morning star shines brightly in the evening. We shall suppose he has placed an order with us for a custom-built language which will accommodate both the facts of astronomy and the aversion mentioned. The language we are going to supply I shall call a space-time language (more briefly, a S-T language) because the individuals in its domain (S-T individuals) are entities occupying positions in four-dimensional space-time or occupying chunks of space-time. By "occupies," I mean "has" or "exemplifies." That is, positions are to be regarded as properties exemplified in individuals. The alternative would be to observe a distinction between the position P and the property of occupying the position P, and such a distinction seems to me to be useless.

Our individuals can be added to form larger, not necessarily continuous, individuals, by the operations of the calculus of indi-

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viduals. The individuals added will be parts of a whole, not members. In particular, the planet Venus will be regarded as a four-dimensional spiral segment of space-time—or rather, as something *having* this spiral segment as a property. Parts of Venus will fall into temporal spans during which it is visible in the evening and the individual sum of these parts will be referred to by the expression, "the evening star," which functions as a definite description. Similarly for "the morning star." Then the individual, Venus, will be the sum of the individuals, the morning star, the evening star, together with those parts of Venus during whose temporal span the planet is not visible from the earth. Further, we shall suppose that we have defined a relation of *kinship* (Quine's word, *op. cit. infra*) which will obtain between two individuals if we should normally say that they are stages in the history of the same individual. For example, the successive parts of Venus will be mutually kindred. *In* the language briefly outlined, the expressions "the morning star" and "the evening star" are descriptions which denote kindred but distinct individuals. On this account the morning star does not shine brightly in the evening. Clearly, if a person wishes to deny that the morning star shines in the evening, he must give up the strict identity of the morning and evening stars and be satisfied with their kinship.

There is a temptation to regard the relation of identity as normally predicated of the morning and evening stars as a quasi-descriptive relation like kinship. This is a mistake because the replacement of kinship by identity amounts to a decision to revamp the notion of an individual and, in fact, the whole language structure. Let us use the term "substance-language" to denote languages resulting from the switch from kinship to identity, and the term "substance-individual" to denote the individuals in the domain of a substance-language. *Ordinary language is a substance-language.* The S-T individuals, the morning star and the evening star, are distinct; the corresponding substance-individuals are identical. The substance-individual, Venus, moves in an ellipse about the sun. The S-T individual, Venus, does not move at all (rather, could not significantly be said either to move or not to move); it occupies a four-dimensional helix lying about the world line of the sun. It is important to notice that no predicate of change or motion can significantly be applied to a S-T individual *without radical reinterpretation.* In passing from a S-T language to a substance-language we pass from a four-dimensional manifold of changeless individuals to a three-dimensional manifold of individuals enduring through time.

Before examining in detail this transition, I shall consider

Quine's attack on the problem of sameness, because his procedure is *roughly* approximate to that we have followed in constructing a S-T language. In his paper, "Identity, Ostension, and Hypostasis,"[1] Quine considers the problem of change raised by Heraclitus and concludes that I *can* bathe in the same *river* twice, but not in the same river stage. Since he explains (p. 621) that "a river is a process through time and the river-stages are its momentary parts," I judge that Quine's river is what I am calling a S-T individual. From the context I infer that Quine is *not* confusing identity and kinship. His procedure seems to be this (and I am a little dubious about it): he is attributing properties of the part to the whole. That is, since *part* of the S-T individual Venus (namely, the S-T morning star) shines brightly in the morning, Quine would conclude, I take it, that S-T Venus itself may in some sense be said to shine brightly in the morning. Similarly, S-T Venus may be said to shine brightly in the evening. Also the descriptions, "the morning star" and "the evening star," may be taken as referring to the whole of S-T Venus and not simply to the morning-shining and evening-shining parts respectively. Thus even in S-T language we should be able to maintain the identity of the morning star and the evening star. As an account of sameness through change, Quine's analysis would seem to be simple and adequate. An individual is a four-dimensional entity and it "changes" if a later part has properties different from those of an earlier part (rather like a building at Yale which "changes" from Georgian on the east to Gothic on the west and is nevertheless the *same* building).

Yet there is something odd about all this. If the River Caÿster (to return to Quine's example) is a "process through time and the river-stages are its momentary parts," then I myself must be a sort of four-dimensional worm. The trouble is that I do not *feel* like a four-dimensional worm. Moreover, swimming is an activity, and since a S-T individual cannot significantly be said to move or engage in activity, I do not see how Quine can say that I *swim* in the River Caÿster (except possibly in an odd sense of the word "swim"). Again, on Quine's view it is only *part* of me that is in *part of a part* of the river, whereas I should want to say that *all* of me went swimming. I left no parts of me on the bank with my clothes. That is, I should be insisting on my right to regard myself as a substance-individual and not as a four-dimensional worm (a S-T individual) and on my right to use a substance-language in talking about myself. It could be replied that I am being captious. Might I not be content with interpreting what I want

[1] This JOURNAL, Vol. XLVII (1950), pp. 621–633.

to say as meaning that *all* of a temporal slice of me is totally surrounded by the contemporaneous temporal slice of the Caÿster? This is one of those seductive invitations to think with the learned and speak with the vulgar. In general I think we ought to disapprove of this gambit, because speaking one way and "construing" it another represents a subtle form of philosophical dishonesty.

In this case the construction is very odd. Worse, if the notion of a S-T individual were fully worked out in terms of the corresponding language, then it would turn out that we could not use such a language for saying the things we want to say—even though, in principle at least, the angels could use such a language for framing a complete state-description of the world. And if we cannot speak in S-T terms then we cannot think or construe in S-T terms and there is no question of thinking with the learned anyway. That is why my objection to Quine's analysis is not *merely* a complaint about oddity or resistance to novelty. Ordinary language is a substance-language, and, whether we like it or not, we have not the slightest intention of abandoning this language *type*. And so we have no alternative but to seek a clearer understanding of substance-individuals. The reader is quite possibly wondering at this point what all the fuss is about, because it has not been made clear that there really are two distinct language types. That is what has to be made clear now.

II

The most important thing that happens when we pass from a S-T language to a substance-language is this: *in general,* the individuals lose part of their essence. *In particular,* the time determinant is shifted across the copula of empirical sentences from subject to predicate. I shall clarify the foregoing in a roundabout way by raising a question about the essence of an individual. If we ask what it is to be an individual in the domain of a given language, we shall be told that we know the answer when we know the identity conditions for individuals. We immediately ask: When are two individuals identical? We are now told that two individuals are identical if and only if they have all their properties in common. The difficulty with this answer is that it merely states the syntactical properties of the identity sign but gives us no help in deciding in a given case whether to declare two individuals identical. What we want is an operational definition. I suggest tentatively that two individuals are identical if they have their *essence* in common, and that essence depends, not on the par-

ticular designation of an entity (the received doctrine), but rather on the total language.

The difficulty here can best be disclosed in terms of a specific example involving substance-individuals. In theosophical circles, I believe, it is held that Leonardo da Vinci is the reincarnation of Judas Iscariot, that is, that Leonardo is identical with Judas. It *follows from* this identification that the individuals have all their properties in common. Leonardo betrayed Christ in the first century and Judas painted *The Last Supper* in the fifteenth. The example is intended to show how useless the all-properties-in-common criterion is in helping us to decide whether two individuals are identical, whether, that is, they do in fact have all their properties in common. Presumably in a theosophist's language some property of these two men is essential and its common possession justifies theosophists in treating the two men as identical. If we, on the other hand, wish to treat them as distinct, then it is incumbent upon us to state the principle of individuation. This is the major problem arising in connection with a substance-language. The problem is much simpler in S-T language and so we shall tackle the latter case first in order to get the hang of things.

A terminological parenthesis. By "essence" I understand "what makes an entity *that* entity and not a different entity." More specifically, I shall say: its b is of the essence of an a if and only if: two a's are identical if and only if they have the same b. For example, its membership is of the essence of a class because two classes are identical if and only if they have the same membership. Its membership is what makes a class *that* class and not a different one.

The problem of essence (or, the problem of individuation) for S-T individuals is pretty straightforward. Its position in space-time is of the essence of an individual. Two individuals are identical if and only if they have the same position. Now we have to get at the same thing—and more—axiomatically. I have in mind a language in which positions are designated by quadruples of real number expressions, 'P', 'P_i', and 'P_j' are variables ranging over positions, 'Q', 'Q_i', and 'Q_j' are variables ranging over non-positional qualities. We may now lay down axioms of individuation.

Ax.A1. $(x)\,(\exists P)\,(Px)$

("Every individual has at least one position.")

Ax.A2. $(P_i x\ \&\ P_j x) \supset P_i = P_j$

("Every individual has at most one position.")

Ax.A3. $(P)\,(\exists x)\,(Px)$

("For every position there is at least one individual which has it.")

Ax.A4. $(Px\ \&\ Py) \supset x = y$

("For every position there is at most one individual which has it.")

From axioms A1 and A4 we can deduce as theorems:

Th.A1. $x = y = (\exists P)\,(Px\ \&\ Py)$

Th.A2. $[(\imath x)(Q_i x) = (\imath x)(Q_j x)] \equiv (\exists P)[P(\imath x)(Q_i x)\ \&\ P(\imath x)(Q_j x)]$

It is Th.A1 and perhaps more especially Th.A2 which give us our principle of individuation. At any rate in substance-language we shall be looking for an analogue of Th.A2. There are doubtless any number of different kinds of S-T language which could be set up and I shall have to explain one of the oddities of the present method, namely Ax.A3, the "fullness of space-time" axiom, which states that every position has an individual. I want a language which will differ in only trivial respects from the co-ordinate language Carnap has suggested in various places (e.g., *The Logical Syntax of Language*, p. 141). In Carnap's language the positions *are* the individuals. Our language has no proper names of individuals, their function being performed by *essential descriptions* of the form, "the individual at position P_1" or "$(\imath x)$ (x occupies (u_1, u_1, u_1, t_1))." By axioms A3 and A4 all of these descriptions have descripta and there is a full parallel between our essential descriptions and Carnap's individual expressions. Where Carnap says, "the individual P_1 has the quality Q_1 (or perhaps has no quality at all)," we say, "the individual *which occupies* P_1 has the quality Q_1 (or perhaps has no quality at all)." Where Carnap says, "the individual which is Q_1 *is identical with* P_1," we say, "the individual which is Q_1 *occupies* (has) P_1." Carnap has identified the individual with its essence (its position, i.e.) and as a result, his co-ordinate language requires no axioms of individuation. Although I wanted a language roughly comparable to Carnap's language (it being quite familiar), I also wanted a language which, requiring axioms of individuation, would serve a heuristic purpose.

In our S-T language we might record a simple matter of fact in a sentence like the following:

$(\imath x)$ (x occupies (u_1, u_1, u_1, t_1)) is blue.

In substance-language we might say:

a is blue at (time) t_1,

where the copula "is" is used tenselessly. (These sentences cannot be synonymous!) Notice that the time symbol 't_1' has been shifted

across the copula from subject to predicate. This is what I was referring to earlier when I said that in passing from a S-T language to a substance-language, the individuals lose part of their essence, the time symbol being shifted from subject to predicate. We now have the rather sticky question as to what remains as essence. Location or place in three-dimensional *space* is not of the essence of a substance-individual. Location in Westminster Abbey is not of the essence of the Stone of Scone, otherwise there would not have been a time recently when people were engaged in looking for it. On the other hand location in space is essential in a curious qualified sense: whatever place a (substance-) individual *happens* to occupy at a time, any individual occupying the same place at the same time is identical with it and any individual occupying a different place at that time is different.

When it comes to formulating the principle of individuation axiomatically, we find certain difficulties which make it impossible to arrive at as clear an account as was possible in the case of S-T individuals. For example, if we were to see a pumpkin change into a coach, would we say it was the same individual or not? Again, suppose the Eiffel Tower were to vanish from Paris and an exact replica were to appear in Central Park, New York. Would we say it was the same individual or not? Perhaps all that can be said is that it is a very good thing that this sort of change does not occur outside of quantum mechanics. In what follows it will be assumed that we are dealing with a language containing triples of real number expressions which refer to *places* in *space* (not positions in space-time). 'P', 'P_i', and 'P_j' are variables ranging over places; 't', 't_i', and 't_j' are variables ranging over times; 'Q', 'Q_1', and 'Q_j' are variables ranging over non-spatial qualities. The expression '$P-t(x)$' will mean 'x is at place P at time t' and '$Q-t(x)$' will mean 'x has the quality Q at time t.'

Ax.B1. $(x)(\exists P)(\exists t)P-t(x)$

("For every individual, there is at least one place and a time such that the individual is at that place at that time.")

Ax.B2. $(x)\{[P_i-t(x) \;\&\; P_j-t(x)] \supset P_i = P_j\}$

("Every individual occupies at most one place at a time.")

Ax.B3. $(x)(y)\{[P-t(x) \;\&\; P-t(y)] \supset x = y\}$

("Two individuals occupying the same place at the same time are identical.")

In our S-T language we had a "fullness of space-time" axiom. This kind of situation is precisely what we want to avoid in

substance-language, and so we lay down an axiom which will state that if an individual occupies a place at a time, then it must manifest itself at that time by some non-spatial quality. We shall also require an axiom to state that if an individual has a quality at a time it also has a place at that time.

Ax.B4. $(x)[P\text{-}t(x) \supset (\exists Q)Q\text{-}t(x)]$

Ax.B5. $(x)[Q\text{-}t(x) \supset (\exists P)P\text{-}t(x)]$

Now we need an axiom which will make it clear why we do not identify Judas and Leonardo and why we regard Saul (before the trip to Damascus) and Paul (after the same trip) as identical. For this I shall have to fall back on ordinary English.

Ax.B6. $(\imath x)[P_i\text{-}t_i(x)] = (\imath x)[P_j\text{-}t_j(x)] \equiv$ there is a continuous series of places including P_i and P_j and a continuous series of times including t_i and t_j such that for any time t or the time series between t_i and t_j there is a place P of the place series between (series-between, not spatially between) P_i and P_j such that there is an individual at P at t; and for any two places P_m and P_n series-between P_i and P_j, if P_m is series-prior to P_n then there is a time t_m and a time t_n both between t_i and t_j such that t_m is earlier than t_n and there is an individual at P_m at t_m and there is an individual at P_n at t_n.

The following are derivable as theorems by ordinary logic:

Th.B1. $P\text{-}t(\imath x)[Q\text{-}t(x)] \equiv \{Q\text{-}t(\imath x)[P\text{-}t(x)] \,\&\, (y)[Q\text{-}t(y) \supset P\text{-}t(y)]\}$

Th.B2. $P_j\text{-}t_j(\imath x)[Q\text{-}t_i(x)] \equiv (\exists P_i)\{P_i\text{-}t_i(\imath x)[Q\text{-}t_i(x)] \,\&\, (\imath x)[P_i\text{-}t_i(x)] = (\imath x)[P_j\text{-}t_j(x)]\}$

Th.B3. $\{(\imath x)[Q_i\text{-}t_i(x)] = (\imath x)[Q_j\text{-}t_j(x)]\} \equiv (\exists P)(\exists t)\{P\text{-}t(\imath x)[Q_i\text{-}t_i(x)] \,\&\, P\text{-}t(\imath x)[Q_j\text{-}t_j(x)]\}$

Our interest in just these three theorems is determined by the fact that a variant of the left hand side of Th.B1 appears on the right hand side of Th.B2 (together with the LHS of Ax.B6), and a variant of the LHS of Th.B2 appears on the RHS of Th.B3. And Th.B3 is the sought analogue in substance-language of Th.A2. Given appropriate factual information, then Th.B3 would enable us to identify the author of *Waverley* and the author of *Marmion* and differentiate the betrayer of Christ from the painter of *The Last Supper*. Notice that our axioms require quantification over

variables other than individual variables; a telling argument, surely, against nominalism.

Of the several difficulties with the above axiom set I shall mention only one. An object is not located at a single point in space. We might take it that the place of an object is the place of its center of gravity. However, if one object is enclosed in another, their centers of gravity might coincide and we should have two objects occupying the same "place" at the same time, contrary to Ax.B3. Thus the variable 'P' in Ax.B3 has to be taken as ranging over volumes, where by *volume,* we understand, not something like *three cubic feet,* but rather, something like *the volume between 120° W. and 130° W. and between 45° N. and 50° N. and between mean sea level and 5000 feet.* Now, however, the value expressions of the variable 'P' are not simply triples of real number expressions, but expressions considerably more complicated, and Ax.B6 has to be replaced by an axiom much more elaborate. It is more than likely, however, that we have reached the point where further technical elaboration would not provide greater illumination. Even if we could get some kind of replacement for Ax.B6 there would still be cases where identification and differentiation would be a matter of *ad hoc* decision and not a matter of principle (e.g., the fission of an amoeba).

Now let us go back and consider the simplest kind of empirical statement in substance-language: "a has the quality Q_1 at time t_1." We can do existential generalization to get, "There is a time t_i such that a is Q_1 at t_i" or, "a is Q_1 at some time." It is so obvious, so necessary, that if Philip is drunk, Philip is drunk *at some time,* that if Scott wrote *Waverley,* he wrote it *during some period* —it is so obvious and necessary, that in ordinary language we generally drop the "at some time" and are left with the simple, the *too* simple, noun-copula-adjective form of sentence. (Perfidious ordinary language!) I said that it is necessary that if Philip is drunk, Philip is drunk at some time. The necessity here presents us with an entrancing mystery. I shall state without present argument that although ordinary logical necessity *may* be (and I think is) a matter of convention, the present kind of necessity is not.

Heraclitus' puzzle as to how a thing can change and yet remain the same is usually—and I think correctly—resolved by pointing out that the thing changes qualitatively and is numerically the same. Our axioms of (substance-individual) individuation presumably make it a bit clearer what kind of entity it is that retains its identity through change. They also show that these changing entities are quite different from Quine's individuals.

III

There is a good deal more to be said on both the immutability and the indestructibility of substances (i.e., substance-individuals). Rather than say it, however, I would prefer to go on to something else. It was noted that in passing from a S-T language to a substance-language we passed from a four-dimensional to a three-dimensional manifold of individuals and thereby—in a loose sense—effected a reduction in the number of individuals. We may carry the process of reduction still further to get the absolute-language, in whose domain there is just one individual, the Absolute (A). Since there is only one individual, no axioms of individuation are required. The Absolute is at all places at all times. The simplest empirical sentences would be of the form: "A has the quality Q_1 at place P_1 at time t_1." I am using the word "Absolute" because this third language type accommodates the idealists' contention that there is only one subject of judgment, that every judgment ascribes a characteristic to the Absolute. The world of the absolute-language is quite pleasing: since there is only one individual, one would expect this language to generate some enthusiasm among philosophers inclined to parsimony. Mathematicians, on the other hand, would take a dim view of it because in a world of only one individual the Axiom of Infinity would be a trifle wide of the mark.

Although I have permitted myself to be facetious in dealing with the absolute-language, I would conjecture that when it comes to theology (e.g., the doctrine of the atonement) and ethics, then the absolute-language may turn out to have some point after all. Aristotle observes (*E.N.* 1104^{b}30) that there are three objects of choice, the pleasant, the advantageous, and the noble. These "objects" correspond to the three ethical positions, pleasure-of-the-present-moment hedonism, egoism, and altruism. One can make out an enlightening parallel between these three positions and the three main language types dealt with in this paper.

By way of a general conclusion, I would point out that even in Aristotle's *Physics* and *Metaphysics* it is fairly clear that problems having to do with substance fall under two heads: those relating to the "it" which underlies or has attributes and those relating to the "it" which persists unchanged through change. I think it would be fair to say that insofar as I have been dealing with the "problem of substance" I have been dealing only with the second class of problems and have ignored the first. Thus the reader's undoubted dissatisfaction with the present treatment may be due in part to the fact that only half an answer has been given.

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SPATIAL AND TEMPORAL ANALOGIES AND THE CONCEPT OF IDENTITY *

FEW things have engendered more philosophical puzzlement than time. Unlike space, which has generally seemed above all simple and obvious, time has always been regarded by a great many philosophers and theologians as a dark subject of speculation, fundamentally enigmatic, even incomprehensible. It is also something concerning which men can become bewitched over statements which, on the slightest analysis, turn out to express the most trivial truisms—such as, "the past cannot be changed," "the future (or the past) is nothing," "time cannot be reversed," and so on.

I want to remove some of this mysteriousness by showing that temporal and spatial relations, contrary to much traditional thought, are radically alike; or, more precisely, that (1) terms ordinarily used in a peculiarly temporal sense have spatial counterparts and vice versa, and that accordingly (2) many propositions involving temporal concepts which seem obviously and necessarily true, are just as necessarily but not so obviously true when reformulated in terms of spatial relations; or, if false in terms of spatial concepts, then false in terms of temporal ones too.

Such a project is sometimes rejected as a "spatializing of time," but what I have in mind is no more a spatialization of time than a temporalization of space; if it is either, it is the other as well. Of course I am not the first to press the analogies between space and time,[1] but I believe they can be carried much farther than has been thought possible heretofore.

Basic concepts.—A basic notion to be employed is that of *place*, which can be either spatial or temporal. "At Boston, Mass." designates a spatial place, "On May 1, 1955" a temporal one. A corollary is the notion of *distance*, which is likewise either spatial or temporal. New York and Boston are spatially distant from each other and from other things, while Plato and Kant are temporally so; but distances, of either kind, can of course be great or small. The allied notion of *being present*, incidentally, is in fact commonly used in both senses, as meaning "here" or "now" or both. Again, the concept of *length* or *extension* has a place in both contexts,

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[1] See in particular Donald Williams, "The Myth of Passage," this JOURNAL, Vol. XLVIII (1951), pp. 457–472, and Nelson Goodman, *The Structure of Appearance* (Harvard, 1951), concluding chapter.

though this is easily overlooked. Things can be spatially long or short, but so too they can have a long or brief duration, i.e., be temporally long or short.[2] Indeed, there is no reason why temporal dimension should not be included in any description of the shape of a thing. The notion of length, in turn, leads to that of *parts*, both spatial and temporal.[3] Distinctions between the spatial parts of things are commonplace, but it is no less significant to reason that things have temporal parts too, often quite dissimilar to each other—for instance, widely separated parts of a man's history, or narrowly separated temporal parts of a kaleidoscope. Again, the notion of *direction* has a use with respect to both spatial and temporal relations; one can, for instance, speak of the direction from past to future, from future to past, from north to south, and so on, none of which directions is any more or less genuine or intrinsic than the others. Finally, the concept of a *physical object* involves both space and time, since any such object has, for instance, both kinds of extension and both kinds of parts. Objects are often distinguished from *events*, on the assumption that the notion of the former is a fundamentally spatial one and that of the latter fundamentally temporal, but no such distinction is necessary and none will be made here. Any physical object is itself an event, i.e., endures and has a more or less interesting history; or, as Nelson Goodman has expressed it, "a thing is a monotonous event; an event is an unstable thing."[4]

Most of these terms are thus ambiguous, but I think the context will prevent misunderstanding in what follows. A spatial place, however, will usually be called just a "place" (abbreviated "L"), and a temporal one a "time" (abbreviated "T"). "Spatial part" and "temporal part" will sometimes be abbreviated as "S-part" and "T-part." Other abbreviations will be obvious.

Spatial and temporal analogies.—My procedure now will be to state, in the form of objections, propositions which are commonly thought to be obviously true, and to express a radical difference between space and time. Concerning each such proposition I shall show, in the form of a reply, that no such difference is expressed, that is, that no such proposition is, under similar interpretations, true of time and false of space or vice versa. I shall begin with the simpler and easier propositions and conclude with the more difficult.

[2] *Cf.* Goodman, *op. cit.*, p. 285.

[3] *Ibid.*, pp. 285, 301.

[4] *Ibid.*, p. 285. *Cf.* C. D. Broad, *Scientific Thought* (London, 1923), p. 54: "By an *event* I am going to mean anything that endures at all, no matter how long it lasts or whether it be qualitatively alike or qualitatively different at adjacent stages in its history."

First objection.—An object cannot be in two places at once, though it can occupy two or more times at only one place.

An object occupies two times in one place by remaining awhile where it is, or by being removed from its place and later returned, or by being annihilated and subsequently recreated at the same spot. But it seems plain that no object can be in two places at one time, and in particular that it cannot be "returned" to a time, for when one tries to imagine situations that might be so described he unavoidably finds himself thinking of at least two, perhaps similar, objects.

Reply.—This statement seems to express a simple and obvious difference between space and time, but it does not. For it should be noted that an object is ordinarily said to be in one place at two times, only if it also occupies all the time in between, whether at that place or another. But with a similar proviso, an object can likewise be in two places at one time, namely, by occupying the space between them as well.[5] A ball, for instance, occupies two places at once, if the places be chosen as those of opposite sides; but in so doing, it also occupies all the places between. It is tempting to say that only *part* of the ball is in either place; but then, it is a different *temporal* part of an object which, at the same place, is in either of two times.

The situation analogous to that of an object which is removed from its place and later returned is more complicated, and will be considered more fully in answer to another objection (the seventh), but for now the analogy can be shown superficially as follows.

An object which occupies one place at two times by being returned to that place is one which fulfills the following description:

> O is at L_1 and T_1 and T_2; it temporally extends from T_1 to T_2, but is *then* (i.e., sometime in that interval) at places other than L_1.

The analogy of a thing being in two places at one time by being returned to that time would therefore be something fulfilling this description:

> O is at T_1 and L_1 and L_2; it spatially extends from L_1 to L_2, but is *there* (i.e., somewhere in that interval) at times other than T_1.

And an example of this would be some widespread physical disturbance, like a roll of thunder, existing simultaneously in two nearby towns, but at a different time, earlier or later, somewhere between them. One might want to insist that several objects or

[5] *Cf.* Goodman, *op. cit.*, p. 301.

events are involved in this case, in contrast to the selfsame object involved in the former, but this would only betray a prejudice in the common notion of identity. For just as we can and ordinarily do say that moving about in space—i.e., acquiring and losing spatial relations with other things over a lapse of time—does not destroy the identity of a thing, we have equal reason to say that moving about in time—i.e., acquiring and losing temporal relations with other things over a lapse of space—does not destroy it either.

Finally, we might want to say that an object can be in the same place at two times without filling the time in between—which would, of course, simply amount to its being annihilated and then recreated at the same place. And it seems that we might be entitled in some situations to regard it as the *same* object at two times, or at least that there is no overwhelming reason for thinking that two wholly distinct though similar objects are involved; we do, for instance, sometimes speak of hearing the same note of a whistle twice over. But the analogy to this is exceedingly simple, viz., any object simultaneously at two places and nowhere between, such as, a billiard ball which is at once at both sides of a table. Here most people would want to insist that we have two wholly distinct balls, however similar to each other, simply on the ground that they stand in quite different spatial relations to other things. But in the former case, too, the object stands in quite different temporal relations to other things at the two times involved, so there is no significant difference in the two examples. It is perhaps arbitrary whether we say that there is an identity or a diversity of things in either example, but it would be utterly capricious to insist that there is an identity in the one case but a diversity in the other, for the two situations are analogous. I would myself, however, say that the things are diverse in both cases.

Second objection.—But time, unlike space, is an essential ingredient of motion and change, of coming to be and passing away.[6]

This would seem to follow from the *meanings* of "motion" and "change." Further, it seems impossible to form any idea of change, process, or mutation, abstracted from any concept of time; spatial relations, on the other hand, are static in essence.

Reply.—This objection is necessarily true, only because "motion" and "change," as ordinarily used and defined, *mean* temporal processes; "coming to be" and "passing away" *mean* generation and destruction *in time*, and are appropriately tensed. Such ordinary usage and definition do not, however, preclude the possibility of a spatial kind of change, exactly analogous to temporal change and no less significant to reason; and, in fact, if spatial re-

[6] *Cf.* Goodman, *ibid.*

lations are substituted for temporal ones in any description of motion or change, we find that we *do* have a description of something real and familiar.

Ordinarily, to say that a thing *moves* is to say that it occupies one place at one time and another place at another. But it is, evidently, the same thing to say that it occupies one time at one place and another time at another; so *this* kind of change involves spatial relations just as much as, and in the same way as, it involves temporal ones; it is neither more nor less a temporal process than a spatial one.[7]

To say, further, that a thing *changes,* in a more general sense of "change," means that it has an interesting history, acquiring and losing properties while enduring—which means simply that its temporal parts are dissimilar. But why may we not say, analogously, that a thing may have an interesting geography, acquiring and losing properties in its spatial extension, i.e., that at one and the same time its various spatial parts are dissimilar? An example of temporal change would be an object which, at any given place, is blue at one time and red at another. An example of spatial change would be an object—e.g., a wire—which, at any given time, is blue at one end and red at the other, and perhaps various other colors between. This sense of "change" is not, moreover, at all unusual; it would make sense, for instance, to say of a wire, which was found to be red in one town and blue in another, that *somewhere* (not sometime) between the two towns it changes color, and such change might, like temporal change, be gradual or abrupt, i.e., occur over a long or brief interval. This manner of speaking would, I suggest, sound artificial only to one who insisted, quite arbitrarily, that temporal change is somehow more genuine than spatial change.

To say, finally, that something "comes to be" and then "passes away" means simply that there are two times, that the thing extends from one such time to the other, and does not extend beyond either of them.[8] The spatial analogy to this is too evident to require description.

Third objection.—Things can change their spatial positions, but not their temporal ones, these being, once given, fixed eternally.

A thing which is north of a given object, for instance, can be switched to the south of it, but a thing which is at any time future to a given thing is everlastingly so, and can in no way be shifted

[7] *Cf.* Williams, *op. cit.*, p. 463.

[8] This applies to absolute generation and destruction only (Aristotle's γένεσις καὶ φθορά) as distinct from coming to be or ceasing to be with respect to this or that property (κίνησις), for which the description could be modified in an obvious way.

to become past to it. It is precisely this which constitutes the irreversibility of time, and which has no parallel in space. And it is such considerations as these which should lead us to conclude that it is space, if anything, which is the more "fluid," and time "static."[9]

Reply.—What has happened here is that the analogies have not been made complete, and that the notion of change has been used only in its temporal sense in both contexts. The statement, profoundly uttered, that things cannot change their positions in time derives its truth from, and in fact amounts to no more than, the utterly trivial statement that a thing cannot be in two times at once (at one time), and is comparable to the equally trivial statement that a thing cannot be in two places at one place.[10] Moreover, the claim that two things which are so related that the one is future to the other are *always* so related, and cannot at another time be truthfully represented as oppositely related, is surely true; but it is hardly more significant than a statement that two things which are so related that one is north of the other are *everywhere* so related, and cannot at another place be truthfully represented as oppositely related. It is true in Rhode Island, for instance, that I am now south of Boston; it is no less true in California.

But of course at another time I might be north of Boston. Can we find an analogy for this in temporal relations? I.e., can a description be given of something which is at one place past to another thing, and at another place future to it? It seems clear that it can, and that, accordingly, in any sense in which things can change positions in space, they can in a precisely analogous and equally significant way change them in time, with the result that time is neither more nor less "fluid" and neither more nor less "static" or "fixed" than space.

For note, first, that things can change their positions in space, *only* through a lapse of time, time being used up in moving from one place to another. A description of two things, A and B, which change their relative positions in space would thus be:

At T_1 A is north of B,
At T_2 A is south of B.

[9] As Goodman in fact does conclude, *op. cit.*, pp. 301–302.

[10] *Cf.* Williams, *op. cit.*, p. 463. Goodman says (*op. cit.*, p. 301) that "a minimal spatially changing (moving) compound not merely occupies two places but occupies them at different times. . . . Analogously, a minimal temporally changing compound would have not merely to occupy two times but to occupy them at different times," which is of course absurd. But if this were a real analogy, the last word of this statement would be "places" rather than "times," in which case there would be no absurdity at all.

Analogously, a description of the temporal relations of two things changing would be:

At L_1 A is future to B,
At L_2 A is past to B.

And an example fitting this description is not hard to find. Let A, for example, be an earthquake, occurring gradually over an area which includes two towns, and let B be a stroke of a clock (any place in the world). Now it is possible that in one town, A is future to B, and in the other, past to B. This fulfills the description.

It is surely tempting to object here that the analogy is mistaken, on the ground that the earthquake occurring in one place is one event and that occurring at the other place another, so that it is not one and the same thing which is both past and future to another. But all this calls attention to is the fact that a lapse of space is required to make the example work—and we have already seen that, analogously, a lapse of time is absolutely required for things to change their spatial positions. Moreover, if one wanted to insist that the earthquake existing at two times in different places was in fact two earthquakes, we could just as well say, as we certainly would not, that any object existing at two places in different times was in fact two objects—that if something is moved from the south to the north of Boston, for instance, then it is no longer the same object, but a new and wholly different one. The reason we do not say this is that, in occupying different times and places, it occupies all the time in between (though not all at one place); but so too, the earthquake existing in two places and times occupies all the space in between (though not all at one time), and accordingly remains one identical thing throughout this lapse of space if any object moving in space remains one identical thing throughout its lapse of time. The analogy is, then, complete.

Fourth objection.—But time is something moving, or flowing, in a fixed direction from future to past and at an unalterable rate; space, on the other hand, is everywhere the same and unchanging.[11]

It is for this reason that we speak meaningfully of the passage of time, of the continual recession of things past and the approach of things future. It is because of this, too, that people naturally think of time as like a great river, engulfing all things in its course. Nothing of the sort, however, is appropriate to the notion of space.

[11] John Wild develops this point in "The New Empiricism and Human Time," *Review of Metaphysics*, Vol. VII (1954). He says "everything in the world of nature seems to be engulfed in an irreversible flux of time which cannot be quickened or retarded, but flows everywhere at a constant rate" (p. 543), whereas "space as such is fixed" (p. 541).

Reply.—It seems quite certain that there is *no* sense in which time moves. For, in the first place, no given time can move with respect to any other time, without involving the absurdity of two different times temporally coinciding, just as no place can move with respect to any other place, without involving the absurdity of two places spatially coinciding. Neither the date nor the place of one's birth, for instance, can move in relation to the date or place of anything else.[12]

But if, on the other hand, one supposes that the *whole* of time moves, how can one express the direction of such motion? Towards what, away from what, or in relation to what can it move? We cannot say that time arises out of the future and moves into the past, nor that it unfolds itself from the past and moves into the future, for the past and the future are themselves part of the whole of time, and must move with it if time moves at all. Nor can we say that time moves in relation to the present, for there is no one place in time, called "the present," with respect to which anything can move. A constant temporal distance obtains between any time whatever and any other time that anyone calls "the present."

Of course there is a temptation to say that the present moves in some sense, since the expression "the present" never designates the same time twice over; a moment no sooner emerges from the future and becomes present, then it lapses forever into an ever receding past. But this kind of statement, gravely asserted, says only that the word "now" never, i.e., at no time, designates more than one time, viz., the time of its utterance. To which we can add that the word "here" likewise nowhere, i.e., at no place, designates more than one place, viz., the place of its utterance.

Moreover, if it did make sense to speak of time, or any part of it such as the present, as moving, then it would make equal sense to speak of its ceasing to move, or moving more or less rapidly than it does, however persuaded one might be of the falsity of such suggestions. Yet such ways of speaking do not merely say what is false, they say nothing at all. When one tries, for instance, to think of time "standing still," what he in fact envisages is everything *but* time standing still—i.e., of a cessation of change, over a period of time. Indeed, the notion of anything at all being at rest involves the idea of its being unchanged in some respect over an interval of time, which surely renders the idea of time's being at rest unintelligible. Similarly, the suggestion that the rate of time's flow might be accelerated or diminished involves the same difficulties as that of space being expanded or contracted, the former just bringing to mind the thought of things happening more

[12] *Cf.* Goodman, *op. cit.*, p. 298.

or less rapidly than usual, and the latter the thought of all things in space becoming larger or smaller, or at greater or lesser distances from each other.

I conclude, then, that if time moves, all time moves together, just as, if space expands or contracts, it all does so together; but that in fact neither supposition is intelligible, and space and time are in this respect, again, alike.[13]

Fifth objection.—While time may not then in any clear sense be moving, yet everything *in* time moves from the future through the present and on into the past.[14]

It is for this reason that, though things need not always be moving in space, nothing can pause or rest in time, but becomes past immediately upon having been present, and then becomes increasingly remote in the past. It is with this in mind that we speak of history unfolding, and of facing the future and leaving the past ever farther behind us. Such ways of speaking are too common and useful to be thought to express no truth at all.

Reply.—It makes little difference whether one says that time moves, or that things move in time, and we have already considered the former suggestion. The following additional comments can, however, be made.

All that is meant in saying that anything or everything "moves in time" in this sense is that it has temporal extension[15]; that it "moves" from the future through the present and into the past means simply that some of its temporal parts are earlier than others —which of course must be true in any case, if we are to avoid the idea that two times might coincide. Nor is everything moving, even in this sense, in the direction of the future; we cannot say of things past, for instance, that they are so moving, any more than we can say of something south of us—say, some southern state—that it here stretches towards the north. Of course of things past we can say that they were first future, then present, then became past; but this again says only that they have temporal extension, and that they do not extend to the temporal present, i.e., do not reach to "here" in time. The analogy to this is not something

[13] Much more thoroughgoing arguments than mine on this point are to be found in Goodman, *op. cit.*, concluding chapter, and Williams, *op. cit.*, pp. 461 ff.

[14] John Wild, in addition to holding (I believe) that time "flows everywhere at a constant rate," holds also that everything *in* time flows at a constant rate, for he says that "time . . . determines every being *in* time to flow *with* it in a single direction at a constant rate" (*ibid.*, italics supplied).

[15] *Cf.* Williams, *op. cit.*, p. 463: "Each of us proceeds through time only as a fence proceeds across a farm: that is, parts of our being, and the fence's, occupy successive instants and points, respectively."

moving through space in the usual way, but simply something spatially extended which does not reach to the spatial present, such as, again, some southern state.

That, moreover, any object O should pause or be at rest in space means only that it occupies the whole of a given place at two different times and at all times between; that is, that

O is at L_1 throughout the interval T_1 through T_2.

That, similarly, an object should pause or be at rest in time means that it occupies the whole of a given time at two different places and at all places between; that is, that

O is at T_1 throughout the interval L_1 through L_2,

which applies to an enormous number of things, such as, for instance, bridges and roads. Of course the object in our second description is very likely to occupy more time than is designated by "T_1," especially if this be taken as representing but an instant, within which time nothing at all can exist; but so also is the object of our first description likely to occupy more space than is designated by "L_1," especially if this be taken as a spatial point, within which again nothing at all can exist. Both the place of the first description and the time of the second must, accordingly, be taken as having some size, and it is not *necessary* that the first object exist anywhere else—i.e., be any larger than L_1—nor that the second object exist "anywhen" else—i.e., be temporally any larger than T_1.

Sixth objection.—But two things can move closer together or farther apart in space; they cannot do so in time.[16]

That things move closer together or farther apart in space is an everyday fact of experience. But the idea of increasing or diminishing the temporal intervals between two things—such as Caesar's birth and his death—involves obvious absurdities.

Reply.—To say that two things can move closer together or farther apart in space only means that they can at different times be separated by smaller or larger spatial intervals. This is surely true, but it is necessary to notice that these differing spatial intervals do not separate the same temporal parts of such objects. The description of such a situation would thus be:

At T_1 T-part$_1$ of object A and T-part$_1$ of object B are separated by a spatial interval x.

At T_2 T-part$_2$ of object A and T-part$_2$ of object B are separated by a spatial interval y, larger or smaller than x.

[16] *Cf.* Goodman, *op. cit.*, p. 301.

To say, analogously, that two things can move closer together or farther apart in time means that they can at different places be separated by smaller or larger temporal intervals. That is:

> At L_1 S-part$_1$ of object A and S-part$_1$ of object B are separated by a temporal interval x.
>
> At L_2 S-part$_2$ of object A and S-part$_2$ of object B are separated by a temporal interval y, larger or smaller than x.

And this, too, describes a familiar kind of motion, though not so obviously. Consider, for example, two rolls of thunder, considered as aerial disturbances either heard or unheard, each existing in two nearby towns, separated in one town by an interval of one second, and in the other by an interval of two seconds. This situation fits our description. And while these different temporal distances obviously separate different spatial parts of the two things involved, we saw (what is easy to overlook) that in the former case it was different temporal parts of two objects which were at different times separated by different spatial distances. If, accordingly, anyone should want to insist that it is not the *same* two things which are at different places separated by different temporal intervals, simply on the ground that the things involved *are* at different places, and that they therefore in no sense *move* closer together in time, we can with equal reason insist that it is not the *same* two things which move closer together or farther apart in space, and that they therefore in no sense really *move* in space, simply on the ground that the things involved are at different times.

Now I think the reason this sort of analogy does not occur to one very readily is that we unhesitatingly make allowance for a lapse of time when we think of two things moving closer together or farther apart in space, whereas it is not obvious how a similar lapse of space will enable things to move closer together in time. We somehow feel, prior to reflection, that the temporal distance between things should change with no lapse of space in order for them to move closer together or farther apart in time; but in fact there is no more point to this impossible requirement than to requiring, as no one would, no lapse of time in the movement of things towards or away from each other in space. And this way of thinking, again, results from a prejudice concerning identity. We tend to think of an object as remaining one and the same throughout its temporal length—even, sometimes, in spite of discontinuity or gaps between its temporal parts—whereas a spatially extended thing is likely to be thought of as an amalgam of contiguous parts, and any spatial discontinuity between these is enough

to destroy utterly the thought that it is one and the same thing throughout. It is not uncommon, for instance, to speak of the *same* sound, like the blast of a whistle, being heard several times over, but we are never tempted to say that the same object, like a billiard ball, is lying about in various parts of a room; we prefer to say that they are different, similar objects, for no other reason than that they are spatially discrete.

Seventh objection.—A thing can move back and forth in space, though it cannot do so in time.[17]

That things move back and forth in space, reoccupying the places where they were, is, again, a common fact of experience; but it is difficult to see how anything could move back and forth in time, reoccupying a time now past, without moving backwards in time, and thus being in two times at once.

Reply.—To speak of a thing "moving backwards" in time is but a misleading way of expressing the idea that, at times future to now, the thing occupies times past, which is plainly impossible but not very profound.[18] For in *this* sense it is equally impossible for a thing to move backwards in space—e.g., at a place north of here, to occupy a place south.

The real difficulty raised by this objection, however, is that of seeing how, if at all, it is possible for anything to move back and forth in time in a sense which is analogous to that in which things *do* most obviously move back and forth in space. But if the analogy is really carried out at every point, it can be seen that it does still hold for temporal as well as spatial relations.

An object that moves back and forth in space is one which is at one place at one time, at another place at another time, and in the first place at a third time, *without* occupying any two such places at once, i.e., without being so large that it fills both. Assume, then, a small ball which is in one town at noon, in another town at 1:00 o'clock, and back in the first town at 2:00 o'clock. Now it is obvious that one condition of its thus moving back and forth is that it has a considerable temporal length, long enough to reach from the first through the last of the times mentioned; if it did not extend to 2:00 o'clock, it might get to the neighboring town but it would not get back. (We might say that "there would not be time enough," but this is not right. It is not that time would run out, but that the object would run out in time.)

Having temporal extension, such an object also has temporal parts. It will be useful, then, to distinguish three such parts, occupying the times when the object is in either of the two towns;

[17] *Cf.* Goodman, *ibid.*

[18] *Cf.* Williams, *ibid.*

and to keep them distinct, let us give them different colors—say, blue, green, and yellow. This means that the ball starts out as blue, and becomes successively green and yellow as it moves forth and back.

The rather complicated history of this object can thus be fully described as follows:

At T_1 T-part$_1$ of O (blue) is at L_1
No part is at L_2
T-part$_2$ (green) and T-part$_3$ (yellow) do not then exist.

At T_2 T-part$_2$ of O (green) is at L_2
No part is at L_1
T-part$_1$ (blue) and T-part$_3$ (yellow) do not then exist.

At T_3 T-part$_3$ of O (yellow) is at L_1
No part is at L_2
T-part$_1$ (blue) and T-part$_2$ (green) do not then exist.

Now if there is any analogy to this, consisting of an object moving back and forth in time, it must be one fulfilling the following description, wherein temporal relations are substituted for spatial ones and vice versa:

At L_1 S-part$_1$ of O is at T_1
No part is at T_2
S-part$_2$ and S-part$_3$ do not there exist.

At L_2 S-part$_2$ of O is at T_2
No part is at T_1
S-part$_1$ and S-part$_3$ do not there exist.

At L_3 S-part$_3$ of O is at T_1
No part is at T_2
S-part$_1$ and S-part$_2$ do not there exist.

Can anything fulfill this description? Evidently it can, though it is a bit shocking to discover it. Consider, for instance, an aerial disturbance such as a whistle blast, existing nonsimultaneously in three nearby towns, A, B, and C, B being located between the other two. At T_1 the disturbance exists in A and C but not in B, and at T_2 it is heard at neither A nor C but is at B. And if it is desired to distinguish this object into spatial parts in some obvious way, as the first was distinguished into temporal ones, we can suppose that it has a different pitch in each town, each pitch thus identifying one spatial part. This completes the analogy, though two further remarks are needed.

The first is, that it would not be strange for people in all three towns to say they heard the same blast. A philosopher might want to argue that they heard three different sounds, in view of their differences in pitch and the difference in their spatial and temporal locations; but there would then be the *same* reason for saying, as one ordinarily would not, that it was three different balls which were involved in our first example. Differences of color and pitch, moreover, were introduced only to make it easier to distinguish between parts, and are otherwise quite unessential.

Secondly, the latter example might seem to involve no real temporal *movement,* though there is no doubt that the ball in the first example moves in space. But the fact that the ball is spatially in linear motion is expressed by this statement: that it is spatially quite small but temporally large—i.e., is a small ball that lasts quite awhile—and that over an interval of time it occupies a space greater than its own spatial dimension. But we find, analogously, that the following statement is true of the object in our second example: that it is temporally quite small and spatially large—i.e., is a brief blast which covers a large area—but that over an interval of space it occupies a time greater than its own temporal dimension. And this statement can, accordingly, be taken as expressing the fact that this object moves—indeed, in this case, moves back and forth—in time.

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HOW PHILOSOPHICAL CAN PHILOSOPHY OF EDUCATION BE?*

AT a time when sovereignty over all domains both spiritual and terrestrial is so fiercely contested, it is surprising to find intellectual territories of doubtful ownership and ambiguous borders. These are the lands of "philosophies of": philosophy of law, science, history, and education; the very areas in which concepts, theories, and systems meet their existential kin, often for the first time. Frequently these meetings are uncomfortable affairs for both participants. But if, as Hegel insisted, essence must appear, then "philosophies of" are not merely desirable confrontations of essence and existence; they are inevitable and indispensable.

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The purpose of this paper is not, however, to defend "philosophies of." It is rather to investigate the more specific question: How philosophical can a philosophy of education be? Inevitably, albeit not so extensively, the complementary question: How educational can a philosophy of education be? will also be examined. Obviously, neither question would have point if there were not a substantial doubt that philosophy of education could be philosophically genuine or educationally helpful.

Accordingly, the first task is to ascertain why this doubt exists; the second is to ask what would make philosophy of education philosophically adequate and respectable; and the third, to indicate how such a discipline could be actualized, and the advantages of such a realization.

I

In the context of common language usage, neither of the above questions is amenable to precise or even sensible discussion. This is so because philosophy can denote anything from the logic of modern physics to a reflective mood about life. Education, for its part, is used to name anything from the reciting of nursery rhymes to the taking of a university degree. Philosophy of education compounds two welters of meaning into a sea in which all meaning is drowned.

It is proposed, therefore, to use the terms "philosophy," "education," and "philosophy of education" throughout this discussion in their narrow sense of academic disciplines. These terms are intended to denote what is taught or what might be taught in courses bearing these titles in college and university catalogues. By philosophers and educators are meant persons who exercise a professional interest in these disciplines.

It is not intended by this limitation of terms to beg the question as to whether the philosophy of education is or can be an academic discipline in its own right. The answer to this question will depend on the degree to which one can specify a content or method sufficiently distinctive to earn for it a separate room in the academic mansion. The limitations are made imperative, however, by the tendency of professional philosophers and educators to take a logical holiday the moment they step out of their professional roles.

Educators discoursing about philosophy of education are likely to equate it with a set of goals, principles, or values to which they are accustomed to pay intellectual and emotional homage. Philosophers—with some very notable exceptions, of course—are rarely disposed to be precise, rigorous, or systematic when talking their "philosophy of education." Much of what Kant, for example,

says about education (E. F. Buchner, *The Educational Theory of Immanuel Kant,* Philadelphia, J. B. Lippincott Company, 1904) is wise and humane, but one would hardly suspect that he was reading another Kantian Critique. And something quite analogous might be said about the philosophical and educational writings of Bertrand Russell (*Education and the Modern World,* New York, W. W. Norton & Co., Inc., 1932).

As a result, the philosophy of education in the hands of both educators and philosophers boils down to a set of general and not very illuminating statements about the good life and what, in the light of their own experience and preferences, the schools ought to be doing about it. Such a body of assertions and exhortations does no particular harm, but it scarcely qualifies as an academic discipline, and certainly not as a philosophical one.

II

In keeping with the very limited meaning given in this paper to the term philosophy, it will be sufficient to answer the question of its proper content by pointing to logic, epistemology, metaphysics, aesthetics, ethics, and value theory in general. The problems taken up in these disciplines are philosophical problems. This means that a philosophy of education to be genuinely philosophical must at one stage or another study, talk about, or refer to these problems as they are formulated in the philosophical disciplines. It will not be enough to show that some relation between an educational problem and a philosophical one *could* be made explicit. It is the business of a philosophy of education to make it explicit. We shall see shortly that there are a number of ways in which this requirement can be met, and some ways are more productive and less artificial than others. The important point to be reiterated here is that this requirement—which entails a rather thorough competence in philosophy—cannot be evaded.

Although we have excused ourselves from discussing or defining the content of philosophy, this much perhaps needs to be said. It is that philosophical activity has two phases: theory-building and theory-evaluation or theory-criticism. The force of this remark lies as much in what it excludes as in what it intends to assert. Philosophical activity is not a search for true statements about matters of fact. However difficult it may be to distinguish philosophical method from scientific method, there is little doubt that their respective outcomes are quite different. However theoretical and even metaphysical the involvements of the empirical sciences may be, their ideal is to discover or predict states of affairs that give preponderant evidence in favor of one theory over its rivals.

On the other hand, no matter how frequently and sincerely philosophy pledges its loyalty to empirical fact and scientific method, it does not rely on new facts to abolish philosophical controversy. Although philosophers do plead with each other to look at the facts, there is apparently no way of agreeing what the relevant facts are and no way of insuring that all observers "see" what they are urged to "look at." Educational philosophy to qualify as philosophical will also have to be essentially theoretical in its activity, but not an activity that has as its primary objective the discovery of fact. It should not, therefore, be confused with history of education, educational psychology, sociology, and educational tests and measurements.

The distinction between theory-building and theory-criticism is a distinction *in mente* merely, but it does help to differentiate types of philosophical activity and types of philosophers. For, although to build a theory one usually begins by criticizing an existing theory, and to evaluate a theory one needs a theory of his own to serve as a criterion, it is nevertheless true that some philosophers construct theories to account for a wide range of philosophical problems, while others do not. There is a sense in which Plato, Aristotle, Kant, Hegel, Whitehead, and Dewey were predominantly theory-builders, and Sextus Empiricus, Hume, and some of our current analytical philosophers are predominantly critics of theory.

Language and concept analysis, the search for presuppositions and consistency, and testing for the presence or absence of meaning are characteristic of theory evaluation, while speculative creativity and synthesis are more essential to theory building. We shall consider educational philosophy in each of these phases separately.

Theory-Building

Theory-building in the philosophy of education is incited by controversies that seem to be beyond the help of empirical science but which one would like to argue on the basis of human reason. A few sample controversies are:

Shall college education be universal or restricted to those who can qualify on some such criterion as intelligence?

Shall religion be taught as part of general education?

Shall the policy of the public schools be fashioned by educational experts or by those who provide the funds for their support?

While these questions could involve matters of fact, the facts would become relevant only when agreement on norms and objectives had been achieved. Thus, whether or not there are reliable tests of intelligence, and whether they are prognostic of certain achievements, are or could be matters of fact. But they would

become relevant to the controversy only if the parties could agree that the achievements requiring intelligence are valuable or more valuable than some other sort of achievement. And when such agreement has been achieved has not the philosophical dimension of the problem been erased?

It is dangerous to assert that any given class of problems are safe from scientific solution. If, for example, psychology should establish as a fact that valuable achievement—on whatever value criteria the controversialists happen to be maintaining—is directly correlated with the kind of achievement requiring intelligence and stimulated by college education, then this particular issue would cease to be philosophically controversial and become a quarrel over means to a generally accepted goal.

Accordingly, one cannot rule out the possibility that the philosophy of education could be deprived of all its controversies by a maturing set of social sciences. This possibility remains remote, however, until science discovers a set of facts that indubitably validates one set of value norms and invalidates all alternative sets. But should this come to pass, not only would the philosophy of education find itself out of business, but even philosophy as such would have to seek a new excuse for being.

However, in the present state of knowledge, the controversy about college education cannot be decided by the facts. If, therefore, the controversy is to continue in rational fashion, both parties will have to take to higher ground. Each position will have to be justified in terms of value schemata, which, in turn, lean on epistemological, ethical, and metaphysical theory. Thus, although the starting point of the discussion was an educational problem and its terminus, it is to be hoped, will be an educational solution, the discussion itself both in content and in method will be throughout philosophical.

Similarly, the issue as to whether religion should or should not be a part of general education can be stated in economic, sociological, political, and psychological terms to begin with, but sooner or later it has to be fought out on epistemological grounds. Either the religious categories have truth value or they do not. Likewise the question as to whether education as a social institution has autonomy with respect to certain educational matters has to be argued out in the epistemological arena, for unless the educator can have superior knowledge in these matters, his claim to autonomy and authority is empty.

In analogous fashion, all problems of curriculum, organization, standards, and methodology, when persistent and serious, force the controversy into philosophical waters and to a considerable depth.

The educational philosopher is impelled to build educational theories which will satisfy both parties to the controversy while avoiding inconsistency or the creation of new difficulties. A theory that purported to solve all educational problems would constitute a systematic philosophy of education. It would provide a terminology (set of concepts) in which to state or to restate the issues and a set of arguments designed to defend one statement against alternative statements. The Platonic theory of education is a classic example of a systematic philosophy of education.

Educational philosophers are often motivated by a sense of social mission that impels them to devise educational schemes for reforming man and society. Rousseau, Pestalozzi, Froebel, and Dewey come to mind as examples. None of these—nor Plato, for that matter—cold-bloodedly "applied" a theoretical system to education. The point to be emphasized is that they took their departure from educational problems and tried to solve them by constructing an educational theory—more or less adequately grounded in philosophy.

In studying the philosophy of education by this problem approach, students learn the standard gambits of dealing with a well-defined set of educational problems. They practice these attacks and defenses on each other and on anyone else willing to engage them in argument. All of which bears a strong resemblance to what students and teachers of philosophy have always done.

Another and more common method of building a philosophy of education is to derive it from some philosophic position such as Idealism, Realism, Thomism, Pragmatism, or Existentialism. This approach asks the question: What does a given position imply for education?

Philosophical points of view may imply much or little for education. Every position implies at least the value of studying and stating that position, and to that extent would favor an education that would encourage such study and statement. Unless a view is fairly explicit about its value theory and incorporates it into some sort of philosophical anthropology, it is rather difficult to derive educational principles and practices from it. Logically, it may even be impossible to make anything more than plausible guesses because educational theory takes into account existential factors that have the brutishness of particulars and do not necessarily follow from any principle. Thus Thomist educators do not agree on which methods or even which type of curriculum would be implied by a Thomist philosophy. Rather diverse methods and curricula seem to be compatible with that philosophy.

Dewey's Instrumentalism comes off best in this type of deriva-

tion because Dewey's activistic theory of knowing is at the same time a theory of learning, reflective thinking, ethical thought, and democratic process. Perhaps this is not so much a process of derivation as of identification.[1]

This derivative approach encourages the labeling of views—a necessary albeit universally deplored activity of philosophers. In the philosophy of education one finds today a tendency to make this labeling and classifying almost an end in itself. Perhaps this tendency can be both understood and forgiven, if it is realized that as an academic discipline philosophy of education is still very young—and in many institutions still embryonic.

Whatever difficulties and shortcomings the derivative method of theory-building may harbor, to carry it on as a student or teacher demands a high order of technical competence both in philosophy and in education. The mental processes used in effecting the derivation, moreover, are indistinguishable from those used by philosophers *qua* philosophers.

So far, two types of theory-building in philosophizing about education have been discussed. First is the devising of a theory to solve an educational problem or a set of them. This leads to logic, epistemology, metaphysics, ethics, and general value theory as a source of concepts and arguments. The second method is to "apply" a general philosophical position such as Idealism to educational problems. This has been called the derivative method. Whatever the merits of these methods, the contention of this paper is that they can qualify as philosophical both with respect to content and method.

Theory-Evaluation

The two modes of theory-building indicate how one may proceed to evaluate theory. A theory that proposes to solve educational problems can be judged with respect to its success. Logical analysis is instituted to test the explanatory power of a theory—its adequacy to relevant factors, and its merits as compared to rival theories.

As with other types of criticism, logic will carry the critic far,

[1] A systematic attempt to derive philosophies of education from standard philosophical schools was made in The National Society for the Study of Education 41st Yearbook, Part I, *Philosophies of Education*, 1942. This symposium volume was prepared by educational philosophers (with the possible exception of Mortimer Adler). In the Society's 54th Yearbook, entitled *Modern Philosophies and Education*, "pure" philosophers—John Wild, Jacques Maritain, Theodore M. Greene, George R. Geiger, Robert S. Cohen, Ralph Harper, Kenneth Burke, Herbert Feigl, and James K. Feibleman—were asked to state the import of their views for education.

but not all of the way. Certain considerations about adequacy are a matter of knowledge and experience and not of logic. Insofar as this is so, the educational philosopher as a critic needs a double armament. Hence his formal training will be required to make him literate and even facile in two literatures—of education and philosophy—although perhaps not to precisely the same degree nor simultaneously.

The criticism of the translation of a position in general philosophy into an educational theory or the milking of a philosophic position for its educational implications also entails a mastery of logic and a familiarity with fact. The critic begins by checking the deductions made by the translator for logical rigor. After that, his knowledge of the philosophical position enables him to point out errors of interpretation (if any) and to suggest deductions that escaped the translator. If his knowledge of education is adequate, he can direct the criticism from this perspective as well. One could elaborate the description of these critical processes, but enough has probably been said to enable philosophers to recognize their own mode of activity in them.

One special mode of criticism should be noted: the linguistic and conceptual analysis currently so popular. Whether the claim that this type of analysis alone is philosophy in the disillusioned meaning of this term is anything more than a claim or not, there is no doubt that semantic dissection is philosophically useful; and particularly so in educational philosophy where slogans and clichés carry so heavy a burden of communication.

Consider one example of semantic chaos: the familiar concept of adjustment. Educators heeding the *dicta* of the psychologists and social scientists use this concept as a value standard. Where adjustment can be given an operational meaning, there is little difficulty with it; for example, "The body makes temperature adjustments," or "The store made a price adjustment on the stove with the cracked enamel."

But suppose a child, being very shy, adjusts by developing an overactive imagination with the result that he habitually tells tall stories—even for the purpose of avoiding punishment. Psychologists, teachers, and moralists agree that this is not a good adjustment, but would they agree as to why it is not?

The statistical concept of normality when used as a measure of adjustment is clear enough, but its adoption as a *desideratum* would condemn all behavior that was more vivid, more interesting, and even more productive than what the middle 68 percent of the population happens to exhibit. Consider now the awkward situation that results when the statistical concept of adjustment is con-

fronted by the "creative development of the personality," a notion no less dear to certain segments of the educational profession than adjustment.

"Interest," "need," "learning," and many other concepts cry out for the kind of semantic purgation that so many philosophical concepts have undergone in recent decades. The cry has been heeded, especially by the more recent Ph.D. aspirants in the philosophy of education who are eager to try out the analytical tools of logic and linguistics.

Some of this analysis, it may be surmised, will be of the puppy-dog-tearing-the-house-apart variety, serving primarily as an outlet for philosophical vigor and enthusiasm. But there will be more solid results also. In educational philosophy clarity and precision are more than the craving of an intellectual fastidiousness because theory is here so close to practice. Inasmuch as educational practice is a resultant of many vectors, its rationale gravitates toward the syncretic, apologetic, and the hortative. The shock of astringent semantic treatment is, therefore, almost always beneficial to the educational enterprise. The problem is all the more urgent because teaching personnel are not notably sophisticated either in the method or the content of philosophy. If they are to become more so, both philosophy and philosophy of education will have to occupy a much more important position in their formal preparation than they now do.

III

It would be a waste of time to argue that sound theory is a *desideratum* in education, were it not for the fact that so many educators and philosophers do not believe it. To some educational administrators education has become equivalent to budgets, school board meetings, building programs, and the hiring and firing of faculty. The "big time" educators in our time are more likely to resemble a "big time" manager or promoter than an intellectual of any stripe. Such men hold theory of any kind suspect unless it leads to immediate results in terms of budget, enrolments, salaries, and similar marks of institutional prosperity.

Other educators are more hospitable to theory, provided it is scientific theory. Although they may not agree on which disciplines to honor by the name of science, they usually agree that philosophy only complicates the already complicated business of running a school.

On the other hand, there are philosophers who likewise tend to regard education, especially in its institutional forms, as a collection of empirical procedures designed or stumbled upon in spe-

cific situations. That this so often is the case with educational procedures does not, of course, mean that it cannot be otherwise, and that it should not be otherwise. To put it bluntly, the theorist of education looks to the philosopher as his most important ally, but too often the philosopher has looked the other way.

At this point it seems pertinent to raise the following questions: Do we need educational philosophers? Do we need educational philosophy as a distinct discipline on the graduate level of study? What kind of training should the specialist in philosophy of education have? We shall concentrate on the last question and thereby touch on the others.

If philosophy of education represents the kind of activity described in this paper, then candidates for the higher degrees in the philosophy of education need professional training in both philosophy and education. Being a professional in one area and an intelligent layman in the other will not do. A student at the master's level with a flair for philosophy and a zeal for education is the ideal candidate for the doctorate in the philosophy of education. He is to be found with about equal frequency in a department of education or in a department of philosophy.

As to the need for specialists in this area, it so happens that in a large number of institutions there is a course, and perhaps more than one, called philosophy of education. Many of these courses are being taught by men who cannot even by courtesy be called philosophers or philosophers of education.[2] The course, therefore, becomes what its teacher can manage to make of it with whatever resources he happens to have. Once, however, persons trained in the philosophy of education are available, the discipline will become better defined and thus more formidable to many who now are not abashed by the prospect of teaching it.

Granting that advanced training in educational philosophy is justifiable, and that individuals with appropriate gifts and zeal are attracted to this field, there still remains an important nest of questions that can arise in the mind of the philosophically inclined graduate student. Am I abandoning philosophy? Will I be giving up the kind of activity I have enjoyed so much in the courses, seminars, and books labeled philosophy? Will I be caught up in social movements, community involvements, so that I cease to be a thinker?

These are important questions because they are most likely to come from just those men and women who might also make the very best philosophers of education. The answer is one that this

[2] A point that was clearly brought out by a committee of this association headed by Professor H. A. Larrabee.

paper has tried to indicate, viz., that one need not and, indeed, that one cannot leave philosophy and still be a philosopher of education. And the proof is rather simple. Whoever has doubts about this matter need only devote some time and honest effort to thinking rigorously about any of the current problems of education. It will not be long before he will realize that he is engaged in an enterprise of no mean philosophical order and of unsurpassed human significance.

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IS A PHILOSOPHY OF EDUCATION NECESSARY?*

IN these times, the school is an institution of great importance. In our country, and probably in others, public controversy abounds concerning it. Should it be used to further, to preserve, or to dissipate the form of society which fosters it? To what degree, and by what procedures, should it receive public support? Should it provide moral, political, or religious training? Should its actions be controlled from without by private groups or public agencies; or should it be free to serve the community as it sees fit? From these and from related questions pours an anxious torrent of words; and many of those concerned feel that it cannot be contained by any wall but one which is raised upon a philosophy of education.[1]

I write this essay in an effort to show the way in which a philosophy of education might be useful in channelizing the flood. And this effort will be advanced by showing what a philosophy of education is.

I

I shall use the word "education" to refer to the academic discipline which treats of all those activities through which the arts and sciences are transmitted from one generation to another as well as those by which they are fostered and advanced. Many accomplish this transmission and fostering with no knowledge of

* To be presented in a symposium on "Philosophy of Education" at the meeting of the American Philosophical Association, Eastern Division, December 27, 1955.

[1] Cf., e.g., Theodore Brameld, *Philosophies of Education in Cultural Perspective*, The Dryden Press, New York, 1955, p. 15.

how to do so. But there is, at present, a tremendous current of academic activity which treats of that subject; and it is for reference to this discipline that I here use the term.

Education concerns itself with three different aspects of transmitting and fostering the arts and sciences: instruction, administration of schools, and guidance of students into those professions and occupations which are best suited to them. With respect to each of these kinds of activity, it makes statements of fact and recommendations. For the making of statements of the former kind, it draws upon a great number of different sources. History, sociology, psychology, anthropology, and common sense—all of these and many other areas as well may be gleaned for information concerning instruction, administration, and guidance. And this information is embodied in statements of the form: If people of a certain sort are dealt with in a certain way, then a certain kind of result will follow. We should notice that this rummaging of common sense and science for information concerning the consequences of instructing, administering, and guiding in certain ways may now give very little reliable information to the factual part of education. It is, nonetheless, the discovery of such information which motivates the academician who is genuinely interested in the factual part of education; and to this idealized discipline, the word is here used to refer.

To the three subordinate areas of the factual part of education correspond three kinds of statement in the recommending part. The factual part informs us that a certain method will suffice to instruct students of a certain sort in a certain subject, that organizing a school in a certain way will, under certain conditions, maintain it as a going concern; and that guiding persons of a certain kind into a certain area of life will satisfy them adequately. But in no case do whatever reliable statements there may be concerning those subjects tell us that instructors, administrators, and counselors ought to act in the ways described. The recommending part of education involves, therefore, some consideration other than that of facts; and consists of statements which recommend that instructors adopt certain teaching methods, that administrators employ certain administrative techniques, and that counselors use certain principles for the professional and vocational direction of their charges.

The factual and the recommending parts of education are thought to be related in a certain way. The factual part is, in all cases, conceived of as a support or justification for the doctrines of the recommending part. It is in view of facts concerning particular kinds of students, schools, and guidance problems that

certain teaching methods, administrative procedures, and guidance principles are recommended; and the facts which education seeks are thought to provide a basis for inference to its recommendations.

Education as an academic discipline is the activity of gathering facts which will justify certain instructional, administrative, and guidance procedures. And this elucidation of the sense of the word "education" must be followed by a brief statement of the concept of philosophy appropriate to the question "Is a philosophy of education necessary?"

"Philosophy" is a word which refers to two distinct kinds of activity. One of them is analysis. This is a process motivated by a desire to understand words, to clarify ideas, and to comprehend concepts clearly and distinctly. There is no way in which its scope may be limited *a priori;* for there is no way of knowing, *a priori,* what words, ideas, or concepts require clarification. But it suffices for our purposes to describe it in this general way.

The second kind of activity may be more precisely delimited. It need not exclude analysis, but does differ from it. It is the activity of arriving at certain theories, those of metaphysics, ethics, epistemology, aesthetics, and logic.

All metaphysical theories declare that the observable world is a manifestation of reality, but each ascribes to reality a different nature. Idealism declares that reality is spiritual; materialism, that it is material; and dualism, that it is somehow both. However they differ, each urges that its reality lies behind, not in, the observable world. That world is described by common sense and science. And since reality is found nowhere in that world, common sense and science can never profess to account for it; nor metaphysics, for common sense and science. If idealism is true, human beings are really spirits; if materialism, they are really matter in motion; if dualism, they are in some way really both. But whatever metaphysical theory be true, or even if none should be, the truth or probability of statements in psychology remains. And so, for all the statements of common sense and science. They are logically independent of any metaphysical theory.

Ethical theories attempt to answer the questions "What things are good and right?" and "What is the nature of goodness and rightness?" With respect to the first question, their answers must, in general, coincide. They must recognize a common body of moral statements; for, as Kant pointed out, no ethical theory can create a new obligation or moral principle. Each must show why these moral statements are correct; and in this endeavor, each must make clear the moral traits which these moral statements express; and from divergent directions of this endeavor, divergent

answers to the second question arise. Some ethical theories hold that moral goodness is a trait accessible only to reason; others, that it is some quality like pleasantness, the possession of which is open to empirical verification; and others still, that it properly characterizes nothing, being, like love or rage, a human response to things, although subtly different from these. And similar statements might be made concerning the varying treatments of moral rightness.

The answers which an ethical theory provides for its first and second questions are related to each other in a way different from the way in which statements in common sense and science are related to metaphysical theories. Common sense and science are indifferent to metaphysics. But in the answer to its second question, ethics professes to clarify and analyze the very traits which everyday moral statements express. If moral goodness is pleasantness, and rightness is conduciveness thereto, then pain can never be good, and actions which make for it never right. And any moral agent who makes either assertion must be mistaken. We might know, in some sense of that word, what is good or right independently of a theory of ethical value; but this is cognitive independence at best. And answers to the first and second questions of ethics are not logically independent of each other. A complete catalogue of what is genuinely good and right would, at once, test every theory as to the nature of goodness and rightness, and show which are true and which false. For a theory of ethical value requires that certain things be good and right, and precludes the possibility that others are.

Epistemology endeavors to answer two questions: "What is knowledge?" and "What are the methods by which it is secured?"; but a list of the statements known and a set of descriptions of the ways in which they come to be so would not answer these questions. The former task is that of a remarkable encyclopedist; the latter would be performed by psychology were it sufficiently developed. The first question asks, rather, for an exhibition of the constituents of knowledge, and for a statement of the relation it requires between the knower and the known. The second asks for a reconstruction of the methods which serve to secure knowledge such that the critic may be assured that it is not vitiated by errors in the procedures through which it was achieved.

The philosophy of education may be understood with relation to the definitions of "philosophy" and "education" made out above. "Philosophy of education," as the phrase is employed here, means an analytical treatment of education together with an attempt to relate it in a certain way to metaphysics, ethics, and

epistemology. I[1] should be noted that this way of understanding the phrase conforms to the practice, if not to the explicit formulation, recorded in the literature.[2] And it should be noted also that logic and aesthetics are not called upon to provide subdivisions of philosophy of education; the reason is that the literature with which we are concerned does not provide any clear basis for such classifications.

In its first subdivision, analysis, philosophy of education is the activity of clarifying our understanding of those terms in education which need it. In its second subdivision, philosophy of education attempts to show that there is a metaphysical explanation for the factual part of education, and a certain supplement for it. In its third subdivision, ethics provides a justification and clarification of the recommendations which education includes. In its fourth subdivision, the philosophy of education endeavors to provide a theory of learning derived from epistemology. I shall now explain this view of philosophy of education in a little more detail.

II

It is not necessary to add anything in elucidation of the first subdivision of education, its analysis; this theme will be resumed in the third section of this essay.

The metaphysics of education attempts to explain the facts which education states. A statement of fact is one belief in whose truth or probability demands only observation of the fact it asserts or of some fact appropriately connected with it; and it is often said that no such statement can explain any other. "That adolescents are rebellious" may truly assert a fact about them; but why they are so the statement itself, of course, cannot explain. Nor can any other statement of fact explain this one adequately; for about every statement of fact, a similar demand for explanation may be made. Indeed, were there a statement which truly asserted all observable facts, one might still ask why this particular statement was true, and not some other. And so, it might be argued, while common sense and science give education its facts, a theory of reality is necessary as their ultimate guarantee.

Besides explaining the facts of education, metaphysical theories also would supplement them in a certain way. Orthodox metaphysical theology throughout Christendom asserts immortality; and orthodox materialism, wherever it occurs, denies it. The assertion of neither theory is a statement of fact in the sense of the

[2] Cf., e.g., *ibid.*, p. 27; and *Modern Philosophies and Education*, edited by Nelson B. Henry, The University of Chicago Press, Chicago, 1955, p. 16.

phrase employed here; for belief in them need not, and perhaps cannot, depend upon observation. But they are statements which, nevertheless, supplement the information which common sense and science provide for education. Most metaphysical theories would add to the statements of fact in education some similar statement concerning the persons and things involved in instruction, administration, and guidance.

The ethics of education concerns itself with the recommendations which education makes concerning those persons and things. These recommendations are of two sorts: those which advocate the existence of certain social orders and personal characters, and those which advocate the means by which those orders and characters are realized. Within education, there is an attempt to justify both the goal recommendations as well as those subordinate to them by statements of fact which education includes. Dewey, for example, endeavors to justify democracy as a goal for the activity of schools by many statements of fact drawn from social psychology and evolutionary biology, and his recommendation that the moving force of learning be allowed to issue from the student, from other statements of fact and from its being a subordinate means to democracy. The ethics of education is a check upon the justification which education offers for its own recommendations. It provides a general theory of what a justification for an ethical statement is; and consists, in part, in an application of this theory to the justifications which education gives for its recommendations. In this way, the question "What things are right and good?" has its counterpart in the ethics of education; for, if we did not know that a recommendation was properly justified, we might not know that the state of affairs recommended was good or right.

The other question of ethics is also reflected in the ethics of education. Suppose we were convinced that the realization and preservation of democracy was the goal toward which the activity of schools should be directed, and that certain instructional and other techniques were the channels through which it could be most easily reached. Suppose further that the justification of this goal and of its subordinate recommendations proved valid upon ethical reflection. It is clear that our conviction might, nonetheless, be mistaken. If we did not know what it is to be good, our belief might attribute this character to democracy by mistake, and thus, the goal recommendations and those subordinate to it would be vitiated. The justification of both recommendations would be correct provided democracy is good; but not knowing the nature of this attribute, the proviso might well be false. And an ethics of education should uncover the nature of the goodness and right-

ness of the things education recommends as well as that of their justification. The ethics of education is simply a consideration of its recommendations, in the light of ethical theory.

Of the two parts of epistemology, only one, to my knowledge, has been thought to have any particular bearing on education. A considerable number of philosophers from Locke to Dewey if not farther have endeavored to make use of their answers to the question "What are the methods by which knowledge may be secured?" for educational purposes. Locke argued that knowledge results from inscription of experience upon a *tabula rasa;* and, accordingly, held that instruction must be a matter of imposing habits upon the student, and confronting him with real things, so far as possible, rather than with verbal descriptions of them. Dewey believed that all knowledge is achieved by engaging in the "scientific method"—apparently the hypothetico-deductive procedure with which we are all familiar; and he contended, accordingly, that instructing and learning must follow that course. The epistemology of education consists in an attempt to derive from an epistemological study of the method of knowledge a description of the procedures by which learning may be furthered, and a consequent recommendation that such courses be pursued in the schools.

III

With this view of the philosophy of education in mind, let us ask why a philosophy of education is necessary, i.e., what the use might be of an analysis, a metaphysics, an ethics, and an epistemology of education.

The necessity of an analysis of education need scarcely be mentioned to be agreed to. Many of the key terms of the discipline are covered with obscurity. Consider, for example, such terms as "experience," "participation," "citizenship," "loyalty," and "democracy." Many persons, in this country at least, hope that democracy may be achieved through the schools; and they endeavor both to point out the paths by which it may be reached and to recommend those paths, by use of terms such as those listed above. One author, with this intention, writes: "Events become experiences through participation, and learning is the process of experiencing. Without effective participation there cannot be effective learning. . . . Learning experiences, to be effective, can seldom be arranged in serial order because the organism does not mature serially. Experiences need to be built on experiences, and behavior patterns on behavior patterns." It is difficult to see how the use of these principles in the schools would further de-

mocracy; for, putting aside the obscurity which gathers around the last term, the dark of their expression makes it difficult to know what those principles are.

The book from which this passage is taken was selected at random, but, although it is more intelligible than many, one who has read a few books of education cannot doubt that the obscurity of the words, ideas, and concepts it employs is typical of the literature. Terms such as "experience" and "participation" possess no settled significance; and a moment's reflection will suffice to bring in question many an initial agreement or disagreement felt by the reader. Much discussion in education, as it is presently conducted, fails to secure mutual understanding for want of a clear analysis of the words, ideas, and concepts in which it is embodied; and until this is forthcoming, we shall know neither what an educational theory is saying, nor whether, consequently, its statements of fact are true and its recommendations legitimate. An analysis of education is necessary in order to provide clear terms, in whatever context they are required, for the description of the facts of education, and for the statement of its recommendations.

It is often supposed that a metaphysics of education is necessary as an explanation for the factual statements of that discipline. It has been supposed, further, that in performing this function, a metaphysics of education exercised a second good office, that of guaranteeing the recommendations which education makes. For, since these recommendations are derived from education's statements of fact, a guarantee of the latter amounts to a strengthening of the former. Let us ask whether these two functions of the metaphysics of education are really necessary.

It is not necessary that metaphysics should explain the statements of fact in education; and it is not, because it is impossible. If it did do so, some metaphysical theory would be a basis from which the statements of fact in education could be derived by logical procedures; but we have seen that all such statements are logically independent of any metaphysical theory. The factual statements of education like all others are shown to be true or probable by scientific procedures or by those of common sense. The explanation of their truth or probability consists in the discovery that observation and inference from it strengthen the evidence for them. If metaphysics did explain them, either metaphysics would be about the observable world as well as reality, or some statements of fact would transcend that world; and both these alternatives are impossible.

It is a simple conclusion that the second good office of the

metaphysics of education is also not necessary. The recommendations of education should, of course, in some way depend upon its facts. If it is true that adolescent children are likely to be rebellious, instructors, administrators, and guidance experts ought to treat them in certain ways, and ought not to treat them in certain others. But if metaphysics does not explain the statements of fact in education, it cannot support its recommendations by that explanation; and it is not necessary that it should.[3]

There is another function which the metaphysics of education may claim. We saw, earlier, that metaphysical theories yield a kind of statement supplementary to statements of fact. That God exists, that the person survives death, that he does not survive it, these are all statements of the kind I have in mind. If they can be shown to be true, metaphysics will provide for education the basis for a considerable number of recommendations. For none can be rendered probable or improbable by scientific procedures; and consequently education's statements of fact cannot include them. Yet, if they are true, they tell us of things about which it is extraordinarily important to urge certain courses of action. And many of those concerned with education have proceeded, consequent to one or other of these metaphysical statements, to lay down as the chief goal recommendation of their education the glorification of God, the salvation of the soul, diligent efforts at material progress, etc.

If this metaphysical supplementation of the information of science and common sense is possible, it is eminently desirable that the metaphysics of education should be practiced. If we could know any statement of the kind I have in mind to be true, it would be the height of folly to fail to draw from metaphysics whatever statements one can that might be relevant to deciding the goals that education should seek, or the courses subordinate to their realization. But it must be noted that, in the present state of things, two preliminary tasks must be accomplished. Metaphysics must first make its supplementary statements clear. "The existence of God," "personal survival," etc., leave much to be desired in this particular. After they are understood, the metaphysics of education must show that they are true. Once these tasks are accomplished, metaphysics of education will be of the greatest im-

[3] In support of the need for metaphysics of education, cf. (e.g., realism) Rupert C. Lodge, *Philosophy of Education*, Harper and Brothers, New York, London, Revised Edition, 1947, p. 78; (e.g., idealism) J. Donald Butler, *Four Philosophies and Their Practice in Education and Religion*, Harper and Brothers, New York, London, 1951, pp. 211–212. I do not attribute, by virtue of these citations, the metaphysical theories mentioned to these authors.

portance for education itself. It is unfortunate that they have not yet been executed.

It might be supposed that the ethics of education is in the same case with its explanatory metaphysics, i.e., not, in its present state, necessary to education at all. This would be a mistake. The reason for the inability of metaphysics to explain statements of fact lies in the metaphysical supposition that reality cannot be found by common sense and science, that it is always behind what we can experience. It is precisely this assumption which renders statements of fact logically independent of the metaphysical theories which would explain them. The ethics of education is not logically independent of its concrete recommendations. The ethics of that subject consists of an analysis of the ethical terms it employs, and of a list of educational recommendations shown to be valid. In its latter part, it requires that education incorporate those recommendations included in its list, and exclude all others. In its former part, the ethics of education includes all the theories there are of the nature of ethical goodness and rightness; and we may not know which of these is correct. But if any is, then the truth of that theory, were it known, would show that many things are not good and right, i.e., those which do not exhibit the features into which goodness and rightness are resolved; and that many others must be good and right, i.e., the ones which possess those features. Thus, for example, the recommendation now often made that the schools be a channel to democracy is not logically independent of an ethics of education. For, if it is valid, it will be an item in the list of those recommendations shown to be so by the ethics of education; and if it is a valid recommendation, a theory of ethical value which is true will require us to make it. The recommendations of education, thus, are not indifferent to either part of the ethics of education as its statements of fact are to metaphysics.

Ethics of education is necessary for a second reason. The goal recommendations and those subordinate to them which education makes are in need of justification; and ethics, as we have seen, can provide a theory in terms of which a justification may be understood and worked out. Such a justification is partly a tracing out of causal relations. That a given course of action will, in fact, make for a certain goal is a causal judgment; as such it is a part of the justification of the subordinate recommendation of that course of action. But the business of justifying any concrete recommendation, is not merely a matter of knowing its causal relatives, but one of sifting and weighing all of the consequences to make sure that arriving at the goal which is recommended will not

be offset by the badness of its accompaniments or of its intermediate collateral ancestors. What the accompanying consequences, and what the intermediate collateral effects of treating children in a relaxed progressive way may be, for example, is a matter which those who have advocated the latter have inquired into too little, and whether the comprehensive result of this treatment of them is a good one is something which those who recommend the happiness and "creativity" of the child's school day have too little concerned themselves with. The conclusion is that an ethics of education is necessary to clarify, to justify, and to correct the recommendations both of goals and subordinate means thereto which education makes.

In our discussion of the epistemology of education, it was pointed out that some philosophers of the subject have supposed that an epistemological study of the methods of knowledge would yield factual statements which might be recommended as principles for instruction. This view is, I think, mistaken. The description of the ways we come to know falls to the authority of psychology; the analysis of the procedures necessary if knowledge is to be secured is within the province of epistemology. The latter consists in a reconstruction of procedures which shows us the criteria which any method must meet if it is to yield knowledge; it provides no actual path. The reason the epistemology of education has been thought necessary lies in the identification of an idealized method of knoweldge with those which are actually employed; and this identification seems to have been required because those who make it fail to distinguish epistemology from psychology. The latter science may afford laws of learning which education may recommend, but epistemology proffers only the criteria of the knowledge learned.

The philosophy of education is necessary to that discipline; for it provides an analysis of its obscure terms, a metaphysical supplement to its statements of fact, and a clarification, justification, and correction of its moral recommendations. The present controversy over the relation of the schools to society, the manner of their support, the kind of training they should provide, and the amount of freedom from external control they should possess, is reflected in education by divergent and incompatible recommendations as to the aims and methods of instruction, administration, and guidance. A philosophy of education could now certainly help to settle this controversy by an analysis of educational terms; this procedure would, at least, aid in arriving at an understanding of the differences between opposing views. But before the metaphysics of education can succor that discipline by supplementing its statements of fact, the supplementation must be made clear and shown true.

And the aid that an ethics of education could provide must wait upon warranted agreement on ethical theory at large. It is to be hoped that a philosophy of education, in the sense in which it is necessary, may be arrived at; this will not be soon. But if philosophers will work at the philosophy of education, little by little and step by step, the analysis may be successful, the ethical help may be realized, and the metaphysical supplementation at least understood.

KINGSLEY PRICE

THE JOHNS HOPKINS UNIVERSITY

AMERICAN PHILOSOPHICAL ASSOCIATION
EASTERN DIVISION

FIFTY-SECOND ANNUAL MEETING

BOSTON UNIVERSITY, DECEMBER 27–29, 1955

PROGRAM

TUESDAY, DECEMBER 27

2:00 P.M. SPACE, TIME, AND INDIVIDUALS (symposium)
Room 50
Neal Wilson and Richard Taylor. Comments by Martin Lean.
Chairman: Victor Lowe

PHILOSOPHY OF EDUCATION (symposium)
Room 224
Harry S. Broudy and Kingsley Price. Comments by James K. Feibleman.
Chairman: John Wild

HISTORY OF PHILOSOPHY
Room 12
Bernard Wand: "Hume's Theory of Obligation." Comments by John W. Lenz.
John Glanville: "The Logic of the 16th and 17th Centuries in Italy and Spain." Comments by H. B. Veatch.
David Savan: "Spinoza and Language." Comments by Mack B. Stokes.
Chairman: Milton C. Nahm

4:45 P.M. BUSINESS MEETING
Hayden Hall

8:00 P.M. SMOKER
Hotel Kenmore

WEDNESDAY, DECEMBER 28

9:00 A.M. ETHICAL RELATIVITY IN THE LIGHT OF RECENT DEVELOPMENTS IN SOCIAL SCIENCE (symposium)
Hayden Hall
F. S. C. Northrop, Clyde Kluckhohn, and Hadley Cantril. Comments by Richard Brandt.
Chairman: Albert G. A. Balz

2:00 P.M. THE CONCEPT OF LOGICAL SIMPLICITY (symposium)

Room 50

Nelson Goodman and John Kemeny. Comments by Patrick Suppes.

Chairman: Roderick M. Chisholm

INTENTION AND INTERPRETATION IN ART (symposium)

Room 12

Isabel Hungerland and Henry Aiken. Comments by Richard Rudner.

Chairman: Arthur Szathmary

INDIAN PHILOSOPHY

Room 224

George B. Burch: "The Basic Principles of Monistic Vedanta." Comments by Swami Akhilananda.

Rashivary Das: "Indian Philosophy and the Problem of the Self." Comments by Horace Friess.

Chairman: Paul Weiss

4:45 P.M. TEA

Shelton Hall

7:00 P.M. BANQUET

Hayden Hall

PRESIDENTIAL ADDRESS BY ALBERT G. A. BALZ: "Prime Matter and Physical Science."

Paul Weiss, *Presiding*

THURSDAY, DECEMBER 29

9:00 A.M. JOINT SESSION WITH THE ASSOCIATION FOR SYMBOLIC LOGIC

Room 50

W. V. Quine: "Unification of Universes in Set Theory" (Presidential Address).

I. M. Bochenski: "History of Logic: a Recent View of its Bearing on the Doctrine of Evolution."

Robert McNaughton: "Mathematical Logic from the Point of View of Classical Mathematics."

Alice Ambrose Lazerowitz: "On Entailment and Logical Necessity."

Chairman: Alonzo Church

THE PHILOSOPHY OF JOSIAH ROYCE

Room 224

D. S. Robinson: "Royce on the Origin and Development of Philosophical Terminology."

Charles Hartshorne: "Royce's Conception of the Absolute Will."

Richard Hocking: "The Influence of Mathematics on Royce's Metaphysics."

Chairman: Everett Hall

ETHICS

Room 12

Oliver Johnson: "Ethical Intuitionism—a Restatement." Comments by Joseph Katz.

Elizabeth Flower: "Preëmptive Order and Definition in Ethics." Comments by Charles Baylis.

Ronald C. Hodges: "Punishment." Comments by John Clark.

Chairman: Lucius Garvin

GROUP MEETINGS

TUESDAY, DECEMBER 27

10:15 A.M. THE PEIRCE SOCIETY

Room 211

Richard L. Cartwright: "Peirce's Philosophy of Mathematics."

Isabel Stearns: "Peirce's Theory of Causation."

Philip P. Wiener: "Peirce's Theory of Signs Applied to Ethics."

6:00 P.M. CREATIVE ETHICS GROUP (dinner meeting)

Commons, Annex A

Discussion Topic: Which Strategic Courses of Action are Open to the United States?

Charles Hartshorne: "Is it Possible to Have Both Freedom and Peace?"

A. Burns Chalmers: "Speak Truth to Power."

Chairman: W. Edward Cushen

7:00 P.M. ASSOCIATION FOR REALISTIC PHILOSOPHY

Room 211

Henry Veatch: "The Logical and the Real."

PERSONALISTIC DISCUSSION GROUP

Claflin Room

Leroy E. Loemker: "Some Problems in Personalism."

SOCIETY FOR ANCIENT GREEK PHILOSOPHY

Coeducational Lounge, Room 101

John Ackrill: "*Sophist* 251–259." Comments by Gregory Vlastos.

Ronald Levinson: "Language, Plato, and Logic." Comments by Rosamond Kent Sprague.

BOOK REVIEW

Ethical Judgment; the Use of Science in Ethics. ABRAHAM EDEL. Glencoe, Ill.: The Free Press, 1955. 348 pp. $5.00.

This book is primarily a naturalistic answer to ethical relativism. And it is an answer not by the route of analysis of the use of ethical language, but, at least in large part, by way of appeal to the facts of biology, psychology, and sociology. Construing "ethical relativism" as the theory that conflicts of ethical conviction are "in some sense ultimate, irreducible, irreconcilable, . . . that the conflict can never be resolved, . . . that there are no common moral questions, and above all, no common moral answers" (p. 30), Professor Edel proceeds to show that consideration of scientific facts does after all eradicate a large proportion of serious disagreements. How this is, Edel shows by discussion of principle and by example. As he says, in the course of summarizing his results, "The dominant emphasis has been on tracing the inroads of growing knowledge and possible knowledge in establishing more definite ethical answers" (p. 335), and his view is that such results can be reached only by "opening the doors to the fuller participation of the human sciences in facing the problems of ethics" (p. 36).

What sort of reasoning does he think may be used, to reach such a result? Consider as an example the question whether frustration of desires should be avoided. As relevant to this, Edel surveys the evidence about the extent of plasticity of human nature, and about the consequences of frustration in maladjustment, restlessness, aggressiveness, stuttering, and the general regression in the level of intellectual functioning (p. 146). He concludes that, while the determination of which needs are basic and which are substantially modifiable is itself a matter for careful re-

search, it is now known that frustration of some needs has a fundamentally warping effect on the personality. And, given these facts, we must concede that it is hard to imagine what sort of person could possibly disagree about whether it is a good thing to satisfy at least some basic desires.

Edel believes that inquiry along these lines can make definite headway toward the solution of such traditional normative controversies as egoism versus utilitarianism. He sketches the outlines of a possible critique of egoism (pp. 313–318), showing how egoists have defended their views by questionable arguments, how "self-asserting self-aggrandizing patterns might be found evil in terms of their psychological, social and historical consequences" (p. 314), and how morality like language is a social phenomenon —a fact forcing us to the conclusion that "the valuational base in the contemporary world requires a social rather than egoistic-individual formulation of moral issues."

One naturally raises the question how far such methods will take us. Edel is very cautious on this point. In criticism of relativists he points out that talk about "ultimate disagreements" has often been vague, and shows the baselessness of some arguments purporting to prove that there can be no reliable methods for resolving disputes about values in an objective way. More constructively, he shows that a sophisticated scrutiny of the evidence indicates a substantial area of moral agreement among all societies. Moreover he urges, to my mind quite justifiably, that this area of agreement would be much wider if the parties were well informed on certain facts of psychology, on the requirements of social living with even a minimal amount of harmony and personal adjustment, and on how certain states of affairs are necessary conditions or consequences of other states of affairs about whose value there is no doubt. Edel does not, however, suppose that such methods can definitively settle *all* ethical questions; in his terminology, there will always be "residual indeterminacies." He does think, however, that at least we can arrive at something which "may be compared in ethical theory to the established body of systematic knowledge in a scientific field. It is a stable core, neither intuitively self-evident nor reducible to a definite set of particular experiences, but capable of refinement and extension both by theoretical analysis and additional experience" (p. 335).

In the course of formulating his general argument as above, what Edel has to say is interesting, well-informed, searching, and provocative. So far, however, his contentions do not tell us what stand he would take on such matters as the analysis of ethical predicates, and the justification or epistemological foundation of

ethical statements. A rather smaller proportion of the book is devoted to these topics, which he himself says are not of primary concern in this volume but are to be dealt with in a later study; indeed, he says that the type of argument he has proposed as successful in "reducing indeterminacies" may itself be interpreted "through different models" (p. 335). But, since this topic is of considerable interest to philosophers at present, I shall state what strikes me as important about Edel's views.

About the analysis of ethical predicates, Professor Edel's statements strike this reviewer as less plain and blunt than one might wish. We can be sure he rejects a noncognitivist, pure emotive theory which holds that ethical disagreements are essentially disagreements in attitude (although such a theorist need not worry about his argument, p. 86, that a psychiatrist would hardly think a person's attitudes important if he knew the person to be neurotic). But his view is that the question of the *actual* use of ethical terms is of only second-rate importance for one's conclusions about "the nature and function of ethical theory" (p. 83). "My point is," he says, "that important as the study of language and the analysis of linguistic uses undoubtedly is, in the last analysis language is servant not master, and men's conceptions of fact and men's actual valuations call the tune" (p. 84). Consequently, perhaps, he is more inclined to construe the emotive theory as a *recommendation* for the adoption of a certain mode of speaking than as a report how ethical terms are actually used. A "good" definition of ethical terms, according to him, is not necessarily a report of actual usage at all; his model is rather that of definition in science, where "an adequate definition reflects an established theory of the field" (p. 76). Indeed, at a later point (p. 333) he seems to hold that such definitions are to be decided upon pragmatically, not excluding moral considerations. (He holds that a choice between different types of ethical theory itself raises value questions which can only be decided in terms of the model-argument already described above.) This reviewer finds some of these points objectionable. Surely there is *a* problem what, if anything, is meant by ethical predicates, and what kind of question a person is posing when he raises an ethical question. If we don't know this, we don't know whether our philosophical discussions have any bearing on the practical questions people actually raise. This question should be kept clearly separate from that of proposals we may wish to make for reforming ordinary speech, or for technical terms in moral philosophy. We can agree that philosophical questions here are misunderstood if they become narrowly verbal, as if moral questions turned upon how a certain

word is used in English. But I note that Edel himself concedes (p. 88) that the simplest way to identify an ethical disagreement is by observing whether one group thinks something *right* and the other *wrong*. Moreover, while we need not oppose the view that some changes in the use of terms like "good" or "wrong" might be a good thing (either in our present sense or some proposed sense of "good"!) and especially that they might well be changed in the sense that people become more clearly conscious what they are doing when they use them, I am not convinced that we, at least as yet, have reason to look to advanced science (terms like "force," "energy") for our cue. If we assume that terms of physics have received their definition in order to render the formulation of *lawful* relations more convenient, we may wonder—while conceding that such technical terms as "x values y" may properly be defined with some such considerations in view—whether there is ground for thinking that ethical usage should be modified for *this* sort of reason.

In view of the foregoing, Edel properly proposes only a "working conception" (p. 79) of "good" and "evil." And what he proposes is that we define "good" in "terms of the direction of human striving or aspiration, and 'evil' as the object of aversion or at least what profoundly frustrates the good." One might raise an eyebrow here, thinking that, alas, people often strive after what is bad for them. But Edel has in mind some qualifications. For instance, he refuses to credit the goal of ambition as good (p. 163) on the ground that it expresses "a driving insecurity rather than a striving for a genuinely adopted goal." I am rather inclined to think that the definition Edel comes nearest to supporting is something like: "x is good" is to mean "x would be approved (or wanted) by anyone who had surveyed x in its total context, and understood its conditions and effects." And I should like very much to know whether he would object to this type of definition.

On the other hand, some things he says about the methodology of ethics raise a question whether he could consistently accept this definition—or indeed *any* explicit definition of a naturalistic sort. For he says (p. 74) that in testing a value statement we must have value statements *in the evidence;* and urges that this view will not lead to circularities any more than does the philosophy of science that avoids "arbitrary first principles." But it seems to me that, if we adopt a naturalistic definition, we *can* justify a value statement by adducing evidence which confirms the truth of our original value statement (but with the purportedly synonymous definiens substituted for the definiendum) and hence *without* the

necessity of any value-predicates appearing in the evidential statements; although we *may*, as Edel points out, validate a particular principle which is in doubt by deriving it from unquestioned ethical principles plus factual material, if we happen to have some unquestioned ethical principles. (See also pp. 334–335.) Some remarks he makes about the advisability of using Dewey's idea "of a problem-situation in ethical theory" (pp. 96 ff.) again raise the question how seriously Edel takes a naturalistic definition of ethical terms. The reviewer would like very much to know what parallel Edel would find between the status of ethical predicates and the predicates of empirical science, particularly with respect to their relation to observation statements and the possibility of confirmation. Until we know this, we are somewhat puzzled about the interpretation of his major arguments "reducing indeterminacy," described above. As I have indicated, he himself suggests that these major arguments might be interpreted in terms of different models; but I am not sure that they couldn't be interpreted according to a Stevensonian model—although I doubt whether Edel would be hospitable toward this suggestion.

In summary, Edel's book is a demonstration of how the problem of ethical relativism may be attacked on the basis of a naturalist-instrumentalist theory of knowledge and ethics, and extensive learning in the fields of psychology, sociology, anthropology, and history. His book is informative and rich in suggestions. His results are stimulating, even exciting, although they may leave us with some puzzles.

RICHARD B. BRANDT

SWARTHMORE COLLEGE

NEW BOOKS AND CURRENT JOURNALS

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BERKELEY, GEORGE: *The Works of George Berkeley, Bishop of Cloyne.* Ed. by A. A. Luce and T. E. Jessop. Volume Seven: *Sermons, A Letter to Sir John James, Primary Visitation Charge & an Address on Confirmation, Essays in the* Guardian, *Journals of Travels in Italy, A Proposal & Berkeley's Petition, Verses on America, Varia.* Ed. by A. A. Luce. London, New York [etc.]: Thomas Nelson [1955]. viii, 398 p. (Bibliotheca Britannica Philosophica.) 30 s.

EDWARDS, JONATHAN: *The Philosophy of Jonathan Edwards from His Private Notebooks.* Ed. by Harvey G. Townsend. Eugene, Oregon: Univ. of Oregon Press, 1955. xxii, 270 p. (Univ. of

Oregon Monographs. Studies in Philosophy, No. 2. September 1955.) Paper, $3.50; Cloth, $5.00.

Experimental Psychology; a Series of Broadcast Talks on Recent Research. By A. J. Watson, Harry Kay, J. A. Deutsch, B. A. Farrell, Michael Argyle, R. C. Oldfield. Ed. by B. A. Farrell. New York: Philosophical Library [1955]. xi, 66 p. $2.75.

FERNANDEZ, MARIA ANGELA: *Limen de la Historia del Pensamiento y Cultura Argentinos.* Buenos Aires, 1955. 62 p.

FIRTH, RAYMOND: *The Fate of the Soul; an Interpretation of Some Primitive Concepts.* Cambridge: University Press; [New York: Cambridge Univ. Press] 1955. 46 p. (The Frazer Lecture for 1955.) $0.50 (2s. 6d.).

HOFSTADTER, RICHARD, and METZGER, WALTER P.: *The Development of Academic Freedom in the United States.* New York: Columbia Univ. Press, 1955. xvi, 527 p. (A Study prepared for the American Academic Freedom Project at Columbia University. Robert M. MacIver, Director.) $5.50.

HUME, DAVID: *An Inquiry Concerning Human Understanding.* With a Supplement: *An Abstract of A Treatise of Human Nature.* Ed. with an introd. by Charles W. Hendel. New York: Liberal Arts Press [1955]. lvi, 198 p. (The Library of Liberal Arts. No. 49.) $0.80.

IBSEN, HENRIK: *Peer Gynt; a Dramatic Poem in Five Acts.* A New Translation by Horace Maynard Finney, M.D. New York: Philosophical Library [1955]. ix, 197 p. $3.75.

JUNG, C. G., and PAULI, W.: *The Interpretation of Nature and the Psyche.* [Tr. from the German.] C. G. Jung: *Synchronicity: An Acausal Connecting Principle.* W. Pauli: *The Influence of Archetypal Ideas on the Scientific Theories of Kepler.* [New York:] Pantheon Books [1955]. vii, 247 p. (Bollingen Series LI.) $3.00.

KÖRNER, STEPHAN: *Conceptual Thinking; a Logical Inquiry.* Cambridge: University Press, Published for the Univ. of Bristol; [New York: Cambridge Univ. Press] 1955. viii, 301 p. (Publications of the Univ. of Bristol.) $5.50.

LANTRUA, ANTONIO: *La filosofia di Augusto Conti.* Padova: CEDAM, 1955. 127 p. (Il pensiero moderno, collana di storia della filosofia, dir. da Carmelo Ottaviano. 2ª ser., Vol. 3°.) L. 1.500.

LAZEROWITZ, MORRIS: *The Structure of Metaphysics.* With a Foreword by John Wisdom. New York: Humanities Press [1955]. xiii, 280 p. (International Library of Psychology, Philosophy and Scientific Method.) $5.00.

LEWIS, CLARENCE IRVING: *The Ground and Nature of the Right.* New York: Columbia Univ. Press, 1955. vi, 97 p. (Wood-

bridge Lectures, delivered at Columbia University. Number Five.) $2.50.

LEWY, IMMANUEL: *The Growth of the Pentateuch; a Literary, Sociological, and Biographical Approach.* Introd. by Robert H. Pfeiffer. New York: Bookman Associates [1955]. 288 p. $4.50.

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OTTAVIANO, CARMELO: *Metafisica dell'essere parziale.* 3ª ed. riv. e accresciuta. Napoli: Alfredo Rondinella, 1954–55. 2 v. L. 6.000.

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THOMAS AQUINAS, SAINT: *In Aristotelis libros Peri Hermenecias et Posteriorum Analyticorum expositio,* cum textu ex recensione leonina, cura et studio P. Fr. Raymundi M. Spiazzi, O. P. [Torino, Roma:] Marietti [1955]. xviii, 439 p.

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THOMAS, GEORGE F.: *Christian Ethics and Moral Philosophy.* New York: Scribner, 1955. xvi, 539 p. $5.75.

THOMSON, SIR GEORGE: *The Foreseeable Future.* Cambridge: University Press; [New York, Cambridge Univ. Press] 1955. vii, 166 p. $2.50.

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15, No. 4, March 1955. *D. R. Cousin:* How Not to Talk (Pedantic Objections to Professor Austin). *Brice Noel Fleming:* Mr. Hare and Naturalism. *Jan Berg:* On Defining Disposition Predicates. *H. Hudson:* People and Part-Whole Talk. *John C. Simopoulos:* The Gambler's Fallacy—a Further Note. —Vol. 15, No. 5, April 1955. *Roderick M. Chisholm:* Law Statements and Counterfactual Inference. *S. Korner:* Truth as a Predicate. *D. J. O'Connor:* Incompatible Properties. *Wilfrid Sellars:* Putnam on Synonymity and Belief.—Vol. 15, No. 6, June 1955. Analysis Competition—Eighth 'Problem'. *Brian O'Shaughnessy:* The Origin of Pain. *Karl R. Popper:* A Note on the Body-Mind Problem (Reply to Prof. Wilfrid Sellars). *D. G. Brown:* Misconceptions of Inference.

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R. Fusfeld: The Source of New Deal Reformism: A Note.—Vol. LXV, No. 4, July 1955. *Ben Halpern:* The Dynamic Elements of Culture. *Lawrence Haworth:* Common Sense Morality. *Iredell Jenkins:* The Significance of Conscience. *David W. Noble:* Veblen and Progress: The American Climate of Opinion. *Kenneth W. Thompson:* Toynbee's Approach to History Reviewed. *Albert William Levi:* On Being One's Self.

THE JOURNAL OF AESTHETICS & ART CRITICISM. Vol. XIII, No. 3, March 1955. *Joseph C. Sloane:* Baudelaire, Chenavard, and "Philosophic Art." *G. N. G. Orsini:* Theory and Practice in Croce's Aesthetics. *Domenico Pesce:* A Note on Croce's Distinction between Poetry and Literature. *Thomas Munro:* Form and Value in the Arts: A Functional Approach. *Horace M. Kallen:* The Comic Spirit in the Freedom of Man. *Isabel C. Hungerland:* The Interpretation of Poetry. *David I. Masson:* Wilfred Owen's Free Phonetic Patterns: Their Style and Function. *David Winfield:* An Essay in the Criticism of Architecture. *Henry David Aiken:* Some Notes Concerning the Aesthetic and the Cognitive. *Arnold Isenberg:* The Problem of Belief.—Vol. XIII, No. 4, June 1955. *Margaret Naumburg:* Art as Symbolic Speech. *Paul L. Frank:* Historical or Stylistic Periods? *Milton C. Nahm:* The Philosophy of Aesthetic Expression. *J. P. Hodin:* Art History or the History of Culture: A Contemporary German Problem. *Carol Hamilton:* Picasso at Antibes. *Jerome Ashmore:* Some Differences between Abstract and Non-Objective Painting. *Wendell Stacy Johnson:* Some Functions of Poetic Form. *William Joseph Rooney:* "Spelt from Sibyl's Leaves"—A Study in Contrasting Methods of Evaluation. *Robert Allen Durr:* Dramatic Pattern in *Paradise Lost*. *Milton Millhauser:* The Form of *Moby-Dick*. *Thomas Munro:* The Strange Neglect of G. L. Raymond; Some Needed Researches in American Aesthetics.—Vol. XIV, No. 1, Sept. 1955. *Etienne Souriau:* A General Methodology for the Scientific Study of Aesthetic Appreciation. *P. A. Michelis:* Refinements in Architecture. *Rudolf Arnheim:* A Review of Proportion. *Campbell Crockett:* Norwegian Arts and Habits. *Ihab H. Hassan:* The Problem of Influence in Literary History: Notes Towards a Definition. *Walter J. Hipple, Jr.:* The Aesthetics of Dugald Stewart: Culmination of a Tradition. *Frederic Will, Jr.:* Cognition through Beauty in Moses Mendelssohn's Early Aesthetics. *Merritt Y. Hughes:* A Meditation on Literary Blasphemy. *Dennison Nash:* Challenge and Response in the American Composer's Career.

Viktor Lowenfeld: The Meaning of Aesthetic Growth for Art Education.

THE JOURNAL OF SYMBOLIC LOGIC. Vol. 20, No. 1, March 1955. *Abner Shimony:* Coherence and the Axioms of Confirmation. *Václav Edvard Beneš:* On the Consistence of an Axiom of Enumerability. *Hao Wang:* Undecidable Sentences Generated by Semantic Paradoxes.—Vol. 20, No. 2, June 1955. *Steven Orey:* Formal Development of Ordinal Number Theory. *Raymond J. Nelson:* Simplest Normal Truth Functions. *Boleslaw Sobociński:* Note on a Problem of Paul Bernays. *M. H. Löb:* Solution of a Problem of Leon Henkin. *Shen Yuting:* Two Semantical Paradoxes. *Herman Rubin and Patrick Suppes:* A Note on Two-Place Predicates and Fitting Sequences of Measure Functions. *Robert L. Stanley:* Simplified Foundations for Mathematical Logic. *Richard Montague:* On the Paradox of Grounded Classes. *W. V. Quine:* A Proof Procedure for Quantification Theory. *Alan Ross Anderson:* Correction to Paper on Modal Logic. *Clifford Spector:* Recursive Well-Orderings.

NOTES AND NEWS

The John Simon Guggenheim Memorial Foundation has announced that fellowships for study in philosophy have been awarded to the following in 1955:

Dr. Irving M. Copi, Associate Professor of Philosophy, University of Michigan: Studies of recent developments in symbolic logic and theory of language.

Dr. Philip Merlan, Professor of Philosophy, Scripps College, Claremont, California: The influence of Aristotle on subsequent thought.

Professor Robert Mack has been appointed Chairman of the Philosophy Department at Connecticut College, New London, Connecticut.

The Franklin J. Matchette Foundation Lectures in Philosophy, Fifth Series, 1955, will be delivered by David Baumgardt, Visiting Professor of Philosophy, Columbia University, on the topic: "Great Types of Western Mysticism: Their Lasting Significance." The individual lectures are as follows:

Monday, November 21: "What is Mysticism?"
Monday, November 28: "Mysticism of Inwardness."
Monday, December 5: "Mysticism of Nature and History."

The lectures will be delivered in the Harkness Academic Theatre, Butler Library, Columbia University, at 8:15 P.M. Cards of admission are not required.

The National Woodrow Wilson Fellowship Program, operating under the Association of Graduate Schools of the Association of American Universities, opened its canvassing for nominations toward fellowships for the academic year 1956–57 with the start of the academic year this September.

The fellowships are awarded upon invitation only, subsequent to the nomination by faculty members of promising candidates. Nominations are requested on the basis of the highest qualities of intellect, character, and personality. It is the intent of the Program to provide an opportunity for young men and women who possess these qualities to undertake a year of advanced study in a graduate school of their choice and thus to determine whether they wish to enter the profession of teaching and scholarship.

In the past year 159 Fellowships were awarded from among 1522 nominations, received from faculty members at 437 institutions. These Fellows come from 109 different colleges and universities; they will be attending 38 graduate schools; their fields of study cover 19 departments.

Currently the Fellowships are restricted to awards for study in the fields of the Social Sciences and Humanities, and they are designed primarily for those who have not yet begun formal graduate work. Students from any college or university will be considered. Upwards of 150 Fellows will be appointed for the coming academic year. Each will be granted a sum of money sufficient to guarantee him an adequate living for the year of his incumbency, the normal stipend for an unmarried Fellow being $1,250 plus an amount to cover tuition. Adjustments in the stipend are made for married Fellows and in case of other special considerations.

Twelve Regional Committees carry on the work of recruiting and selecting Fellows from the United States and Canada. Fellows are appointed only after a personal interview before one of these Committees. To permit the Committees to complete their work in good time, nominations for the Fellowships must be entered prior to November 15, 1955. If the address of the Regional Chairman for your area is not available locally, nominations may be sent to Professor Robert F. Goheen, National Director, National Woodrow Wilson Fellowship Program, South Reunion Hall, Princeton, New Jersey. If so addressed, they should be submitted as far as possible before the deadline.